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Flag state control : an overview and its relationship with port state control

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WORLD MARITIME UNIVERSITY
Malmö, Sweden

FLAG STATE CONTROL

An Overview and its Relationship with Port State Control

By

IQBAL FIKRI
Republic of Indonesia

A dissertation submitted to the World Maritime University in partial
fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

In

MARITIME AFFAIRS

(MARITIME SAFETY AND ENVIRONMENTAL ADMINISTRATION)

2007

DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

Signature : Iqbal Fikri
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Acknowledgment

The choice of writing dissertation had been in my consideration since my first arrival here in Malmö at January 2006. The reason is simple, I want to be one of the selected students, since there is a sort of academic requirements for the students to be eligible to write dissertation. Yet, no one knows that it would be hard before having their own self experience. After finishing it, I can say that it was a very challenging moment that demands a lot of sacrifice, and I have zero regret about it.

I realize that this dissertation is far from a masterpiece class of work. However, if one insists on appreciating this as a useful work, let me accept that and humbly convey the honour to my respectable parents Sari Banun Jawana, Mursjid Roesli, Murtiningsih, Srihastuti Wirya, and Enggun Purwoko. They are my forever school of life.

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ABSTRACT

In maritime safety, the trend shows that flag state control is less dominant than port state control. The trend of PSC today is showing the greater power than before, leaving flag state control behind. This situation brings a reverse condition than it ought to be.

In this dissertation, the reasons behind the lack of flag state control are investigated, as well as the trend of substandard shipping and the shift of the tonnage of world fleet from control point of view.

The approach is to analyze the statistics of major PSC regimes namely Paris MOU, Tokyo MOU, and Indian MOU. Subsequently, the data is examined to spotlight main issues to focus on controlling risk.

The main idea is to focus on critical risk areas in order to exercise flag state control. In addition, the method that is going to be used by Administration shall reflect the priority on higher risk areas. General cargo ships, operational procedures, human factors are examples of the most potential areas to control. As an aid, the diagram of possible methods of control is drawn and evaluated.

In order to follow the success of PSC, flag state control may follow the methods of PSC. The need to establish harmonization between PSC regimes, and joint collaboration between flag state control and PSC would bring high benefits.

KEYWORDS: Flag State Control, Port State Control, Inspection, Recognized Organizations

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List of Abbreviations

ASI	Annual Ship Safety Inspection
BIMCO	Baltic and International Maritime Council
CIC	Concentrated Inspection Campaigns
DNV	Det Norske Veritas
DWT	Dead Weight Tons
EC	European Commission
EMSA	European Maritime Safety Agency
EU	European Union
FOC	Flags of Convenience
GT	Gross Tonnage
IACS	International Association of Classification Societies
ICS	ICS International Chamber of Shipping
ILLC	International Load Line Convention
IMO	International Maritime Organization
INTERCARGO	International Association of Dry Cargo Shipowners
INTERTANKO	International Association of Independent Tanker Owners
ISF	International Shipping Federation
MARPOL	International Convention for the Prevention of Pollution from Ships
MEPC	Marine Environment Protection Committee
MOU	Memorandum of Understanding
MSC	Maritime Safety Committee
MTC	Maritime Transport Committee
NGO	Non Governmental Organization
OECD	Organisation for Economic Co-operation and Development
P&I	Protection & Indemnity
PSC	Port State Control
QSCS	Quality Management System Certification Scheme

RINA	Royal Institute of Naval Architect
RO	Recognized Organizations
SIRC	Seafarers International Research Centre
SOLAS	International Convention for the Safety of Life at Sea
UNCCROS	United Nations Convention on the Conditions for Registration of Ship
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

1. Introduction

1.1 Background

The world had never been so small like today. Perhaps, it is the most suitable saying to describe how we live recently with the global trade when goods are almost freely transported around the world. If we can draw up the node of transportation today, we would find that the globe which is covered by lines. In its *International Trade Statistics 2006*, WTO reported that the total export value of world merchandise trade in 2005 is 10,159 billion US Dollar or the highest in history (2006, pp. 15, 28). It means that more and more people consume on goods produced by foreign countries, instead of their own domestic products. As contemporary example is the appearance of China as new emerging power in industry and trade, it really creates high dependency of Americans for Chinese products. In her book *A Year Without "Made in China": One Family's True Life Adventure in the Global Economy* published in June 2007, an American business journalist named Sara Bongiorni wrote how frustrated she was when trying to boycott Chinese products for the whole year of 2005.

If the world trade creates dependency on foreign commodities, similarly the dependency to sea transportation does. The fact says that shipping contributes to more than 90 percent of global trade with over 25 thousand billion tonne-miles of cargo transported in 2003 (International Maritime Organization [IMO], 2005). While the number of newbuilding ships that enter the world fleet is growing, it is certain that the level of trade will continue to grow time over time. The implication of above figure is to secure the world demand of imported supplies, the safe sea transportation is a non negotiable issue.

It would be irrelevant if we discuss maritime safety without involving the central role of flag states. Besides its obligation in providing service for registration, ownership,

tax, and other commercial matters, maritime administration has ultimate responsibility in ensuring that ships are seaworthy and properly manned. In other words, the public side of maritime administration duties in maritime safety and environmental protection is not less important than the private rights in collecting fee and tax. There should be a comprehension inside maritime administration that ship registration is a contract that contains obligation and rights. As the ships formally sail under a particular flag, consequently they are eligible to enjoy rights of being registered, to enjoy reputation of the flag, and to be closely supervised for their ships' safety by maritime administration. For the latter issue, most of the time it is technically handled by the technical department in administration.

Technical department has a mission to ensure that their fleet follows national and international regulations by the application of acceptable standards. In the attempt, the enforcement for these standards to be maintained at all time is by following the procedure of regular survey and inspection. If only good supervision by the flag state and proper maintenance by shipowner that the ship can sail without significant hindrance such as detention at foreign ports. Being different to port state control that is applicable to foreign ships, the enforcement function upon their own fleet is called **flag state control**.

Unfortunately not all administrations exercise their control properly nor satisfactorily. Not properly in terms of escape from their control duty and not satisfactorily in terms of inadequate survey coverage and expected result. The statistics in some PSC regime points out that there is a relationship between flag and suspected conditions of the ships. Since 1999, Paris MOU in their annual report has been ranking those flags that fall to black list, grey list, and white list. The published list together with the recent trend of more active PSC cooperation indicates that there is a need to 'shame and blame' flag states that do not properly exercise their flag state control. Moreover, there is a message from PSC regime that actually they are the next control layer after flag state control. In other words, PSC is complementary of flag state

control and not substitution. If the Swiss cheese model of Reason (1997) may be adopted, it will look like the figure below.



Figure 1. Barriers by maritime organizations (modified from Swiss Cheese Model by James Reason)

In practicing their statutory functions, many administrations are helped by the existence of technical organizations that are willing to act on behalf of administrations on mutual basis, so called recognized organizations RO. Some maritime administrations mainly focus on the commercial side while leave their statutory obligations of safety and environmental matters on the eyes of recognized organizations, either fully or partially. The other traditional states insist to perform these statutory matters by their own. However, the trend today indicates that the involvement of RO in statutory works is growing. It is not only in the scope of authorization, but also the number of RO involves. It may be interpreted as a signal that more and more administrations intend themselves to be more dominant on supervisory role than in operational level. The problem may arise if administrations, as a consequence of delegation, do not know how to effectively monitor the RO. In other words, it is not only a question about what and how to delegate, but how to control the delegation as well. In the worst case, the delegation may become shift of

work only and exposes higher hazard for higher risk of responsibility. It is necessary to understand that delegation is a transfer of task, while on the other hand it creates new tasks that need new skill –monitoring-, that administrations do not necessarily have if they do the tasks by themselves.

In the rise of awareness to adopt new public management and to positioning themselves as commercial agents who provide satisfactory level of service to their customers, flag states see that the ship registration service is a business of reputation and trust. The tendency of shipowners to search on quality and responsible flag states also drives this transformation. The risk of being inspected more thoroughly in PSC as a consequence of sailing on black list flag is something that shipowners really want to avoid. PSC black list is not the only publication that the shipowners consider. BIMCO, INTERCARGO, ICS/ISF, and INTERTANKO had even published the *Shipping Industry Guidelines on Flag State Performance* for two times that are intended to provide recommendation for shipping companies in choosing appropriate flag (2003; , 2006). As customers, most shipowners enjoy the wide options in choosing flag, as well as freedom to choose flag that suits their need.

Fortunately, some reputable registers react positively by providing not only uncomplicated administration process, but at the same enforce high safety standard to be considered as responsible flag states. They regarded the list as useful means of advertising and therefore seek the way to improve their rank. Perhaps that is why the number of black-list flags has been diminishing over the past few years (Paris MOU Secretariat, 2006). With the today tougher competitiveness in the business and the bad stigma of open registers as flags of convenience FOC, it really reminds the registries that being cheap is not the only way to attract shipowners and to win the competition. Inevitably, in today's era when irresponsible flags are heavily publicized as escape of substandard ships, the option to be a quality flag state is more favorable and profitable.

In conclusion, it should be emphasized that it is not viable to become a quality flag state without proper flag state control, including the challenge on formulating the way to monitor the RO. Imagine Panama's effort in the management of 28 RO (International Maritime Organization [IMO], 2007) and comprises a fleet of 141 million GT (United Nations Conference on Trade and Development [UNCTAD], 2006, p. 137). Therefore, the need to have a well built flag state control is urgent and also beneficiary for flag states. Bear in mind that for flag states, control would not only benefit to the safety side but also financial side, which motivates the writer to conduct this study.

1.2 Scope and objectives

To provide area of focus and limit this study, the writer views that to set up the scope is needed. Thus, this study will outreach the consideration taken by administration to conduct flag state control including the resources issue. Since between flag state control and PSC have similar nature of works, in many times that the data and comparison will be made between them. The ineffectiveness of PSC in specific conditions will be covered in subsequent part. In addition, the economic side of flag selection and flag state control also will be discussed, including the market trend in selecting flag states. Later on, this study will encompass the classification of methods in flag state control, together with the possible combinations among methods. The discussion will be supplied with public domain data and experts' view on specific subjects. However because of the limitation of sources and data, which some flag states hesitate to disclose, the proportion of qualitative discussion will dominate this study. Related issues in flag state control that pertains to RO will be in the scope of this study as well.

In addition, the objectives of this study are:

- To improve flag states understanding on the importance of flag state control.
- To study the relationship between flag state control and PSC.

- To provide comparisons of flag state control and RO monitoring practice in several countries.
- To provide flag states the possible methods in flag state control.
- To discuss issues of Administration resources in dealing with flag state control and RO monitoring obligations.

1.3 Structure and organization

The study will begin with basis of delegation and fundamentals in flag state control and RO monitoring. It will examine the generality of IMO instruments and regional initiatives to improve the practice in maritime administration. The display of some interesting facts will further clarify the insufficiency of those instruments, which will create non-uniformity among maritime administrations. The mechanism of how diverse practice around the world coupled with administration limited resources, will imply to the maritime safety can be found in this chapter. Economic factors on that issue will also be discussed.

Next chapter is a review on legal instruments on flag state control. It will be divided into some parts, each will be dealing with flag state control in international UN convention, IMO conventions, followed by regional initiatives and its legal basis. The experts' theory and view on the matters related to delegation and control will constitute the management basis. The discussion on control management, its principles, and problems will wrap up this chapter.

Third chapter will cover the issues both on flag state control and PSC. The characteristics, effectiveness, associated costs, and challenges of each control will be reviewed and followed by the comparison between flags state control and PSC. The comparison of practice in several maritime administrations concerning the control and RO monitoring will be examined. It will encompass the rationale and

considerations, as well as the resource deployment in control and monitoring. The review is not solely for the information or description purpose, but also to grasp the link between backgrounds, monitoring mechanism chosen, and problems faced by that particular administration.

Later on, the subsequent chapter has aim to introduce the possible methods in conducting flag state control. The methods will be classified into four approaches that mostly not exclusive to each other. In other words, those methods open a room for combination. Each method will be evaluated individually to provide a grasp on its compatibility to other methods. Again, those methods may receive significant influences from PSC, which is more developed than flag state control

As the wrap up to this research, the final chapter on conclusions and recommendations will go over the previous chapter in short and conclude them. It will go along with the shortage of this research before the writer expresses his opinion on better flag state control management in maritime administration.

2. Basics of Flag State Control, Delegation and Monitoring

2.1. International conventions

There is one characteristic of any product of law, it always comes with rights and obligations. So does for the conventions under the auspices of UN that pertain to shipping. Article 94.1 of UNCLOS 1982 stipulates that Every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag. Therefore, flag states shall take necessary measures to ensure safety at sea by surveying their ships periodically by qualified surveyors, as mandate of Article 94.4. While those necessary measures shall conform to generally accepted international regulations, procedures and practices, flag states also have rights to take any steps which may be necessary to secure their observance (Article 94.5).

Those articles in UNCLOS had acted as clear grounds for what Administrations have been performing until now, including the appointment of RO. Even though delegation of flag state duties is not mentioned explicitly, it may be justified under the right to take steps as necessary. There is no limitation of which surveyors are entitled to survey the ships, as long as they are qualified to assess the construction, equipment, and seaworthiness of the ship.

Another convention that is inseparable to flag state regime is the UN Convention on the Conditions for Registration of Ships UNCCROS 1986. The nature as a UN convention coming subsequently after UNCLOS brings its similarity to UNCLOS. The most related provision to the issue is Article 5.3(b) of National Maritime Administration, that states: “That ships flying the flag of such State are periodically surveyed by its authorized surveyors in order to ensure compliance with applicable international rules and standards;”. Even though this convention is not yet into force due to the number of states and tonnage is still below the limit of 40 signatory states

comprises not less than 25% of the world tonnage¹, the context of authorized surveyors is not a controversial part since it has been a renowned and widely-applied practice under IMO conventions.

As a practice, delegation to recognized organizations is not only widely-applied but also lawful. It has been legalized and formalized in the most conventions produced by IMO. Specifically in the SOLAS as the main convention of safety, so as MARPOL to environment; both conventions have identical citation. Below is the quote from Article III of SOLAS 74 Protocol 88:

The Parties to the present Protocol undertake to communicate to, and deposit with, the Secretary-General of the International Maritime Organization (hereinafter referred to as “the Organization”):

- (b) a list of nominated surveyors or recognized organizations which are authorized to act on their behalf in the administration of measures for safety of life at sea for circulation to the Parties for information of their officers, and a notification of the specific responsibilities and conditions of the authority delegated to those nominated surveyors or recognized organizations; and

The similar text with similar meaning can be found in Article III of MARPOL 73/78, as the replacement of MARPOL 73 Article 11(1)(b). The latter also has an identical meaning to what we can find in Article III of SOLAS 1974. Tracing back to its long history, the existence of delegated tasks to recognized organizations implicitly reflects either some of the maritime administration’s technical limited capacity or commercially sound solution to their customer since long ago. In addition,

¹ UNCTAD status of UNCCROS <http://r0.unctad.org/ttl/docs-legal/unc-cml/status/Registration%20of%20Ships%201986.pdf>

Regulation I/6(a) of SOLAS 74 Protocol 88, which is analogous to MARPOL 73/78 Annex I Regulation 4(3)(a) and Annex II Regulation 10(2)(a) states that:

The inspection and survey of ships, so far as regards the enforcement of the provisions of the present Regulations and the granting of exemptions therefrom, shall be carried out by officers of the Administration. The Administration may, however, entrust the inspections and surveys either to surveyors nominated for the purpose or to organizations recognized by it.

There is also another similar article pertaining to the authority of RO, stating that RO surveyors must be empowered to have the same legal influence on instructing repair and necessary maintenance to the ship, whether it is a self-initiative or after a survey on request of port states. We can find it in Regulation I/6(b) of SOLAS 74 Protocol 88, MARPOL 73/78 Annex I Regulation 4(3)(b), as well as in Annex II Regulation 10(2)(b).

This topic of legitimate power has been an endless question and discussion for a long time, because of its pros and cons. People from classification societies believe that dual functions bring advantage for simplicity reason, as one body handle and take care of technical supervision from the ship is in construction until the end of its lifetime (More, 1992). Other propositions say that it is a compromise solution since all parties gain the benefit. Maritime administrations with their limited resources still can run their duties, while shipowners get access to competent surveyors with a worldwide network, and classification societies receive considerable revenue for their operations.

At the other side, the oppositions say that there is a potential unhealthy relationship between those three parties, since classification societies act simultaneously as public and private entity (Hare, 1995). They may have no problem to act as class since it is their nature business. Yet, to be there as a class surveyor and an independent flag

state surveyor at the same occasion, for the same ship and same shipowner, will be weakening their overall power to make objective judgment. This is true to the fact that, especially for a flag state that recognizes several RO and shipowners who own quite considerable fleet, classification societies are under double commercial pressure to retain the ship for not moving to other class and RO. While König expressed this phenomenon as “class-hopping” (Ehlers, Wolfrum, & Borgese, 2002), we may call it as “RO and class-hopping”. Therefore, the considerations also doubled, they realize that there will be double potential loss of income.

Whether it is a proposition or opposition, it is generally agreed that commercial pressure tends to weaken the RO power, just as the fact that the existence of RO brings benefit to safety. From the flag states’ point of view, it is their responsibility to ascertain the completeness of survey, as obligated by SOLAS Regulation I/6(d). This obligation must be taken into considerations, for the flag states to find a creative solution in controlling RO. Thus, the measures will help in reducing the risk of their fleet for being caught by the net of port state control.

2.2. IMO instruments

Among other IMO instruments that relevantly touch upon the issue of RO are:

- Guidelines for the Authorization of Organizations Acting on Behalf of the Administrations Resolution A.739(18)

This guidelines is the center of our analysis on flag state control on RO, as it apparently stresses the control as a consequence of authorization. The recommendation that flag states shall establish a verification and monitoring system lies in the Annex, including the scope of such system.

The Appendix 1 supplies conditions that have to be fulfilled by an organization to be authorized. General conditions as well as specific conditions mainly act as guidance for maritime administration in assessing the readiness of RO. While at the RO side, it acts as minimum criteria that

they have to set up before submitting an application. In other words, this is the meeting point between maritime administration demand and RO compliance.

Appendix 2 mainly serves as areas to be covered by the agreement. These elements of agreement are crucial as it provides rule of the game for the contract between maritime administration and RO. As the main part, the degree of authorization shall be included, as well as rights and obligations of each party. The information on degree of authorization is one of the documents that must be submitted to IMO Secretary General, as consent by Article III of SOLAS 74.

- Specifications on the Survey and Certification Functions of Recognized Organizations Acting on Behalf of the Administrations Resolution A.789(19)

It is suffice to say that it is an episode of Appendix 1 of Resolution A.739(18). The main purpose is to specifically give details of the four areas to be mastered by RO, namely management, technical appraisal, surveys, and qualifications and training. Under each area, modules of competence are given to specify capabilities.

In order to be authorized for specific survey and certification, RO must possess a selected combination of modules in those four areas. The combination may be different for other authorization. Therefore, this Resolution is not only useful at the time of pre-authorization, but for post-authorization as well. In the audit, flag states can re-examine the RO capabilities in related modules that they have been delegated. In other words, it will help flag states on areas of observation during the audit.

- Model Agreement for the Authorization of Recognized Organizations Acting on Behalf of the Administrations MSC/Circ.710 MEPC/Circ.307

Generally, this model agreement serves as an aid to flag states when entering into contract with RO. For the content, it is an elaboration of Appendix 2 of Resolution A.739(18) that was issued on 1993. The structure is the Annex as

the main agreement that will be signed by both parties, followed by Appendix 1 and Appendix 2 that each explains the degree of authorization and reporting mechanism. Attachment can be referred to for additional provision, as customization to flag state's need. Another important feature is the detailing of agreement into full, partial, or limited delegation.

- Guidelines to Assist Flag States in the Implementation of IMO Instruments Resolution A.847(20)

The background of this Resolution is that some Member States find difficulties in fully practicing IMO instruments. One of the areas is delegation of authority and supervision of delegated authority. In the observation, Member States need practical guidance on how to promote uniformity of inspections and to ascertain the quality of inspections. Even though the content does have same tone as previous Resolutions, it should be highlighted that IMO recommends the availability of a trained staff in maritime administrations to conduct field oversight programme, not just behind the desk remote monitoring.

- Self-assessment of Flag State Performance Resolution A.912(22)

In 2002, this Resolution was adopted and significantly provided a practical package for flag states in measuring their compliance to their duties. As a description, most of IMO Resolutions only provide obligations of flag states without detailing the specific target and crucial points. This self-assessment attempts to present criteria and measurable indicators in form of questionnaire to fill in. By doing so, flag state can easily identify their weak points, areas of improvement, and goals to achieve. To some extent, we can say that this self-assessment serves as a model of strength-weakness analysis of flag states. The self-assessment may also be useful as need-assessment for technical cooperation project, to ensure that the aid would be best allocated to the less developed areas.

Another advantage of this voluntary self-assessment is its characteristic as self-reflection. It means that flag states can do the measurement by and for themselves. There is no external assessor involved, no marks, no submission and they can keep it confidential. IMO acts as persuasive as possible by launching this Resolution, considering to the reluctance and sensitivity of some administrations to preserve their reputation if the assessment is made public.

In general, the criteria are divided into internal and external criteria. While internal belong to fulfilment of flag state obligation in areas of legal framework, enforcement, delegation to RO, and casualty investigation, external criteria are those that pertaining to port state control and number of casualties. In another chapter of this dissertation, there will be a discussion about self-assessment that had been published by some flag states, specifically at the part of responsibility of RO.

- Code for the Implementation of Mandatory IMO Instruments Resolution A.973(24)

This is one of the most recent Resolution that is comprehensive enough in detailing the obligations of Member states in general, and particularly when they act as flag states, coastal states, or port states. In some ways, it is akin to a series of Resolution A.847(20) because of its similarity in assisting flag states. Yet, considering that member states not solely act as flag states, the scope is broadened to coastal states and port states. In this Code, all of the obligations are pointed out together with the referred provisions. In relation to monitoring of RO, one can find how difficult it is to act as responsible flag states in monitoring enormous delegated tasks. When a member state deposit their intention to participate in Voluntary IMO Member States Audit Scheme, those listed obligations in Annexes are subject to be audited, while Resolution A.739(18) constitutes an element in it.

Most of those instruments contain general prescriptions on framework of delegation, mechanism of control, and obligations on monitoring RO. As general prescriptions they may not cover details. For example, in Resolution A.739(18) it is instructed that to ensure adequacy of work performed by RO, Administration should design a verification and monitoring system. Surely this is not an undemanding task for maritime administrations that have wide range of responsibilities and limited resources, which is even scarcer in developing countries (Cowley, 1987).

2.3. Regional initiatives

It is noteworthy that a regional initiative also has been adopted in European Commission with their Council Directive 94/57/EC. This Directive has many similarities with IMO instruments above, such as its Article 3 to SOLAS Regulation I/6(a). Its Article 6 is analogue to SOLAS Article III and Model Agreement of MSC/Circ.710 MEPC/Circ.307, so is its Annex to Resolution A.789(19). However, there are at least three distinctions that bring this Directive to be stricter than IMO instruments. The first one is if a member state intends to recognize an organization that is not in Commission's RO list, it must follow a certain process as laid down in Article 4. The procedure for an RO to join the list is to be initially assessed by Commission and the respective Member State, with the scope of general minimum criteria and specific minimum criteria in the Directive's annex. As it had been mentioned before, this annex has parallel content with IMO Resolution A.789(19) that demands organization and technical capability, administration, records, quality assurance, information and publication. The fulfilment of those criteria may end up with Commission approval. The practice outside EU is relatively looser, and recognition and approval is up to assessment of individual IMO member state.

Secondly, there is a provision in Article 9 in light of monitoring RO based on their safety and pollution prevention performance record. This performance rating mainly refers to data from Paris MOU PSC regime. This feature is very useful as it

integrates port state control data as basis for measuring performance. It is also interesting to see that both regimes work hand in hand by recognizing each other's work. Another remarkable point is the risk-based approach by categorizing RO by their performance; it is in line with Paris MOU programme to migrate from 25% annual target inspection rate to selective inspection, so-called target factor (Paris MOU Secretariat, 2002, 2006). In any case it gives an example of monitoring method compared to the generic in Resolution A.739(18).

Last distinction is that the Directive instructs each EU Member State to conduct an audit on biennial basis, as a monitoring measure to the delegated functions. In comparison to MSC/Circ.710 MEPC/Circ.307 Annex point 5 Supervision, the method is to the discretion of Administration and audit on RO is not mandatory. Even the audit frequency and the scope is to be decided between Administrations and RO. In addition to the practice in EU, it is compulsory to have the report accessible to all Member States and Commission. This report may be intended as a medium of sharing information.

In their tasks, the European Commission is assisted by European Maritime Safety Agency (EMSA), including in the scope of continuous monitoring on performance of classification societies. The policy document "Community strategy for maritime safety" on September 27, 2000 describes "Erika I package" highlighted the actions to reinforce Port State Control and Improve control of Classification Societies (Det Norske Veritas et al., 2001)

It should be noted that the comparisons between international and regional instruments above do not indicate that one is better than another. With its character as regional arrangement, EU has moved further to be more specific, more uniform, stricter and smoother harmonized due to the countries similarity in economic and technical capabilities. However, as one of the biggest challenges in law is enforcement, member states especially those who are developing countries, need

recommendations on how to conduct flag state control and monitor the RO. In most cases the Administration may entrust and ask RO expertise, except in the task of supervising and monitoring RO when they have to seek another solution without the help of RO. The absence of such recommendations may bring flag state control into ineffectiveness and reactive not proactive, and in the end an over-reliance to port state control and RO as we have it today.

2.4. Authority, responsibility, and liability

From the legal perspective, the delegation of tasks has legal consequences both for Administrations and RO. As both of them are engaged in contractual agreement and similarly have juridical personality, a dispute may arise anytime. Juridical or legal personality means having capacity to contract, to acquire and dispose movable and immovable property, and to institute legal proceedings. Simply stated, legal personality is having capacity to sue and to be sued². The undergoing pollution case³ on the breaking of oil tanker Erika and blaming over the accident between Malta as flag state administration, Registro Italiano Navale RINA as RO, furthermore Savarese family as the owner and Total as the charterer is a good example of how a delegation of authority can lead to severely complicated dispute and consequences.

Basically, major IMO conventions such as SOLAS and International Convention on Load Lines (ILLC) provide ground for the authority and Administration responsibility. Article III of SOLAS 74 Protocol 88 requires that in delegating the authority to nominated surveyors or recognized organizations, the Member States shall notify its specific responsibilities and conditions of the authority. Whereas SOLAS regulation I/12 paragraph (a)(viii) stated: "...the certificates referred to in this regulation shall be issued or endorsed either by the Administration or by any person or organization authorized by it. In every case, that Administration assumes

² As stated by Mukherjee in Maritime Law lecture, WMU 2006

³ Fairplay, 7 Jun 2007 (Vol.360, No.6433) , p 16

full responsibility for the certificates.” Likewise, the ILLC 1966 as modified by the Protocol 1988 provision in article 16.

In case of liability, it is mentioned in the Attachment of MSC/Circ.710 MEPC/Circ.307 point I.C.2 as follow:

Subject to this Agreement, if a liability is finally and definitively imposed on the [] State for loss or damage which is proved to have been caused by a wilful or grossly negligent act or wilful or grossly negligent omission within the scope of this Agreement by RO, its bodies, officers, employees or others who act on behalf of [RO], its bodies, officers, employees or others who act on behalf of RO, the Administration is entitled, on behalf of the [] State, to full compensation from RO.

Subject to this Agreement, if a liability is finally and definitively imposed on the [] State for loss or damage which is proved to have been caused by any other negligent act or any other negligent omission by the RO bodies, officers, employees or others who act on behalf of RO, the Administration is entitled, on behalf of the [] State, to receive from RO compensation up to the amount of financial liability as defined in the standard terms and conditions of the RO or [] whichever is greater.

From the paragraph above, we can conclude that authority, responsibility, and liability are different in characteristics. While the authority is the right to do the task and distributable, the responsibility is competency to take over the consequences of authority under its full name, and liability is physical or financial obligation to remedy the suffered parties. These distinctions provide a legal basis for the clear

division of tasks and penalty. In addition, in case of damage caused by any RO negligence, it can bring a very serious financial consequence that may lead to RO financial nightmare.

2.5. An overview of management of delegation and control

As we move on to management perspective, delegation is needed until certain degree as an expression of trust. To delegate means to entrust or to appoint the representative with power to act on his or her behalf. In this regard, the delegated party imposes to be controlled by the delegating authority under the process of setting standards, measuring performance, and correcting deviations (Dixon, 2003) as can be seen in figure 2. In respect to the control process, setting standards has a meaning of to establish objectives and the expected outcome thus provides a measurement to evaluate performance, and both serve as a parameter of corrective actions. Contemporarily, the emergence of today's public management to step forward from quantity-based performance measurement to quality-based that is more service-oriented, focus on customer satisfaction, and reliance to inspection.

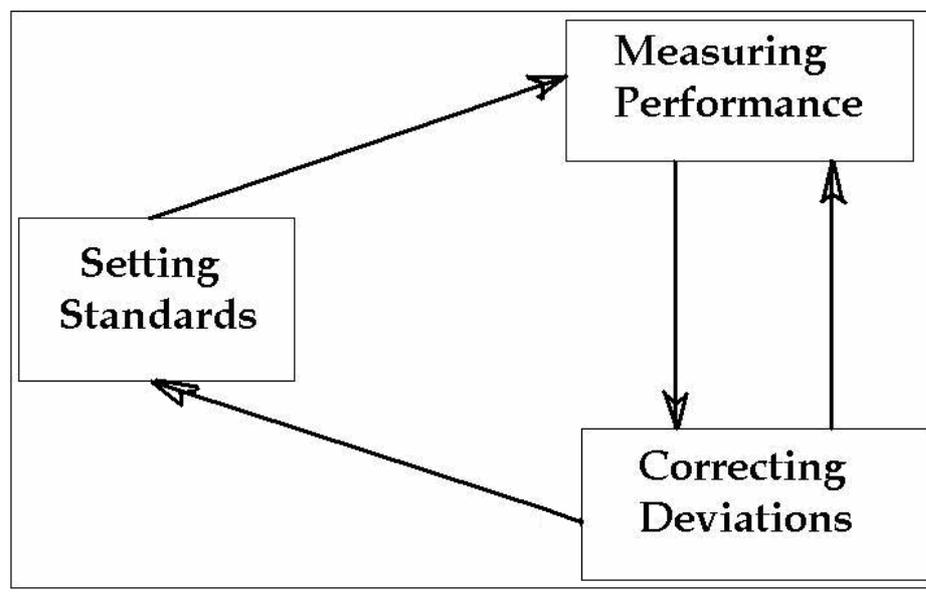


Figure 2. The Control Process (Dixon, 2003, p. 141)

Delegation should not act as a single independent action, meaning that delegation is a result of assessment process. At the same time delegation has its consequences afterwards. Since the process involves chain of action, identification of crucial points is needed in order to achieve desired result:

- Selection

Before delegating the task, it is proper to conduct an assessment to make sure that delegation falls into the right hands. The area of observation should include competence, experience, track record, resources, innovation, and possibility that the works will be properly conducted.

- Lines of communication

Instruction, objectives, circular, report, and any other means of communication should be established to ensure that there is a common understanding to the whole process and mechanism of accountability. Holt (2002) stated that clear communication proves contribution to successful delegation.

- Spell out the target, reward and consequences

Aside from the objective that is commonly general, the target and goal must be specific and measurable. The statement of: “to be categorized in white list of Paris MOU” is a clear articulation on how a maritime administration also expects RO to perform.

Concerning reward and consequences, it is called as positive and negative motivation. The published annual report of RO performance by maritime administration is a kind of motivation, in a sense it motivates RO to perform better. In general, if the ultimate mission and benefit is clear, they are more motivated to take initiative (Shah & Shah, 2007).

- Effective control

Losing control is one of the main phobias after delegating authority (Blair, 1993). Nevertheless, to keep on eye continuously may consume time and

energy, and finally brings the delegation to be ineffective. Therefore, Blair claims that adoption of engineering principle may be helpful, that delegation is not only distribution of work, but distribution of control as well. The delegated authority is required to maintain parallel control by applying the same criteria, so they will exercise authority and also control on your behalf.

Another issue on delegation is the limitation in supervision and control. The quality awareness in maritime administration, scarce availability of resources and lack of technical competences, ineffective method of controlling, wide geographical coverage, increasing span of control, the lack of social control, are considerably contributing factors that limit maritime administrations in exercising their control.

Quality awareness is a culture inside the maritime administration on how they perceive quality. When it comes to slogan and motto, we often find that some open registry declare themselves as quality oriented registry. While in reality the statistics show that their compliance and enforcement to international standards is very weak. Even though most of the statutory functions have been delegated, to assume that the problem lies in RO is a premature, since those particular RO are also authorized by other states with good performance. It is suffice to say that the quality commitment of the flag state contributes to the statistics, and RO in certain degree are under commercial pressure and unable to enforce standards without the backup from maritime administration (Cowley, 1987, p. 131).

The limited number of surveyors is a serious problem for most maritime administrations nowadays, especially in developing countries. The attractiveness and remuneration as civil officers is very low due to limited budget in government. While some of the prospective graduates reasonably prefer to pursue their career at sea or as class surveyor that offer better incentives. The incentives are not only in monetary terms, but also include the development of career, training, higher education, and reputation. In some least developed countries, those skilled labors do not only have the low interest to serve as civil servants but also growing interest to work in foreign countries that offer better wages, better career, and better living environment. This

trend is popularly introduced by UNCTAD as brain drain and brand gain (Manning, 2007). Therefore, it should be a shift of paradigm in maritime administration, particularly in developing countries, in organization and recruitment. It is better to be consistent in delegating most of functions, except monitoring, control, and public-sensitive functions. The reshaping will help administration in managing the organizations better, by hiring selected qualified and better-paid employees who will focus in supervision role, and limit their depth of involvement in technical matters. In other words, this is a restructuring of maritime administration to focus on strategic level, and dispense the operational level on the hands of RO. This is a trade off between the limited resource and the vast work span of administration, without losing administration's ultimate responsibility.

Another source of restraint is the ineffective method in monitoring. As had been mentioned above, administrations face a limited number of personnel. Thus, they have to empower their resource carefully. There is no other way to get their optimum use than to work effectively. Effective method of monitoring may help to achieve objective of supervision with the least effort and least personnel, and avoid unnecessary deployment of resources. The simple example is whether to choose unscheduled inspection on a three years old container ship or sixteen years old chemical tanker ship. Even though young age does not indicate better condition than ageing ships, it could have been assumed that newer ship is less risky and less targeted by port state control. Container ship also does not belong to high risk category. To concentrate more on latter option is assumed to be more appropriate use of resource. Similarly, Jansen (1991, p. 47) prescribes that when extensive authorization has been made, the system of monitoring and supervision should consist of several interacting elements such as:

- audit of authorized organizations
- regular reports on the status of all delegated ships
- thorough examination on survey report of a number of selected ships
- random inspections and verification on documentation

- unscheduled inspections on board

He affirmed that combinations of above elements, if applied may help administrations in evaluating performance of RO and concentrate their own limited resources to the greatest benefit to safety and protection of environment. Even though this description is logic and systematic enough, it would be better if the criteria in selecting ships for additional inspection is also optimizing other available data such as RO performance at PSC report and ships that fall under high risk category, as it is suggested by EU Council Directive 94/57/EC.

The wide geographical coverage comes up as another shortcoming, again affected by limited resources. When most of the ships operate globally, it may become difficult for maritime administration to send inspectors. Panama has initiative to employ inspectors who are stationed around the world to conduct Annual Safety Inspection (ASI)⁴ for ships engaged in international trade. Even though this scheme may serve as additional safety net, its effectiveness can be dubious since the inspectors who conduct the ASI are also from RO⁵. The objectivity is in question, because how objective it is if an RO judges themselves or another RO. Since the items of inspections is similar to annual survey, such as valid documentations, hygiene on board, proper manning, it may turn out to be not more than a duplication of work. The intention may not be achieved, despite only adds bureaucracy, consumes time and additional expenses.

Concerning the contribution of increasing span of control to monitoring, it is based on research by Aghion and Tirole (1997). Their finding is that an increase in the span of control increases the real authority of subordinates. In the application to our topic, by having a considerable number of RO and the fleet that is continuously growing, it will broaden the maritime administration span of control, thus more and more RO

⁴ According to the Panama Merchant Marine Circular No. 20
<http://www.segumar.com/HTML%20Merchant%20Marine%20Circulars/020.htm>

⁵ Isthmus Marine Documentation, a sister of Isthmus Bureau of Shipping, serves ASI for Panamanian flag ships http://www.ibs.com.pa/services/annual_safety_inspections.html. Related articles on http://www.conpahouston.com/maritime_registry.html

activities would be out of sight. Imagine in the case of Panama, to watchdog the condition of 141 million GT fleet and activities of 28 RO is simply not an undemanding task. To overcome the problem they may establish ASI as additional ship inspection, unfortunately by dispensing more authority to RO thus losing the check and balance mechanism. Meagher and Wait (2005) amplify that there is a lost of control for the principal as the span of control increases.

Finally, the last barrier to overcome the constraint of supervision is social control. Public perception towards risk, non-governmental organizations and media pressure may belong to social control. Basically, public do not tolerate accidents, especially casualties with the lost of lives. If media can manipulate safety as public concerns, it would be most likely that government will spend more effort in safety measures, including being more rigid in their supervisory role. This is in line with a theory saying that if the risks are already feared by the public, then increased concern is the likely result (Kasperson, Renn, & Slovic, 1988).

2.6. Selecting measurement tool

Specifically to performance measurement in the safety context, the experts in loss/failure control have endeavored to find one measurement tool for universal use. Needless to say, such a tool would never be existing. Bird and Loftus (1976) recalled that the most important things to recognize are what to measure and what is the influence of measurement result to reach the desirable objectives. Therefore, they listed characteristics of a good measurement tool as follow:

- It should be administratively practical
- The measurement criterion should be quantifiable
- It should be a valid measurement of what it is supposed to represent
- It should be as objective and error-free as possible
- A good measurement system should be understandable

- It should be sensitive to change

3. Flag State Control versus Port State Control

3.1. Substandard shipping

According to IMO Procedures for Port State Control – 2000 Edition, the term of substandard ship means: “a ship whose hull, machinery, equipment, or operational safety is substantially below the standards required by the relevant convention or whose crew is not in conformance with the safe manning document.” In the scope of control, whether by port state or flag state, this definition of substandard ship is applied.

It is important to enlarge the scope of substandard to the area of shipping, not only the ship itself. The rationale is that the state of substandard is not only characterized by a ship’s physical condition, but also lack of crew competence, unskilled action, and their irresponsible and imprudent conduct, not excluding the linguistic inability to communicate with other crew members. Moreover, irresponsible management ashore and incompetent shore staffs also contributes to substandard conditions as a whole. To view the substandard shipping as a matter of system will provide better comprehension on safety management system. That is why the extent of ISM audit encompasses both shipboard management and shore management.

As a matter of fact, improper control may lead to substandard shipping. Any chain in the circle of maritime responsibility, namely owner – shipper – charterer – broker – financier – insurer – lawyer – ship manager – classification society – flag (Spremulli, 2004, p. 39) may have direct or indirect role to the condition of substandard. To include port state in that circle will lead to a broader spectrum of agents in maritime responsibility. Nevertheless, between port state and flag state control, the previous is known to be more objective for they have no interest in control but their environment protection. The nature of port state control is the last defense of port states in protecting their waters from threats. While, the latter is generally assumed to be

weaker since its likelihood to be in the mid of interest. In other words, flag states could have neglected the low standard of their vessels, especially when those vessels sail to port states. It is port states that are threaten most by substandard ships, not the flag states.

3.2. Flag State Control

It would not be comprehensive to discuss flag state control without touching upon the issue of safety, open registry, flags of convenience FOC, economy, shipowner, and sub-standard shipping. All of those factors react and interplay to set up an unhealthy climate as we have today. To find the relationship between them is simply saying: how flag state control can be exercised for the sake of safety, in a condition where some relaxed open registries, known as FOC, provide an economic solution for shipowners engaged in sub-standard shipping operations.

It should be underlined here that there is a distinction between open registers and FOC, meaning that not all open registers are FOC. International Transport Workers' Federation ITF explains that where beneficial ownership and control of a vessel is found to lie elsewhere than in the country of the flag the vessel is flying, the vessel is considered as sailing under a flag of convenience. Essentially, the term of relax can be divided into fiscal and technical. The fiscal relaxation is acceptable due to it is a prerogative of the flag on determining the policy in gaining revenue, there is no global standard for it, and it might not affect the safety. In contrast, open registries shall not offer technical relax as competitive advantage as there are certain standards to be met. In fact, Liberia and Netherlands Antilles are among states that meet the ITF criteria but can perform as white list flags in Paris MOU⁶. Surely they are open registers but not FOC.

⁶ See Paris MOU Black Grey White list 2006
<http://www.parismou.org/upload/pdf/BGW2006%20and%20RO%20performance%20list%202006.pdf>

Therefore it is obvious that open registers enjoy better status than FOC, who are stamped for bad stigma (Mukherjee, 2000). They are popular as flags which allow cheap labour with incompetent crew, short term solution for shipowners who focus on the financial earnings only but not in operational, and have ships that are likely indicated to be substandard ships.

3.2.1 Problems

Ideally the two sides of a coin, the economical attractiveness and the flag state control obligation should not be assumed as a separate entity (Mukherjee, 1993). In the real shipping world where the industry is not self adjusted, it is the task of a regulatory body to ensure that the relationship would be linear between one and another. In a more straight way, flag states should provide zero tolerance for players with no safety awareness. It is noteworthy then that a flag state control possesses a significant role on balancing these different interests.

Concerning the relationship between safety and economy, there are two schools of thought. One assumes that safety or quality does pay. For shipowners, to enforce ship safety standard means that the probability to incur a loss is less, thus safeguarding the ships as asset and capital. In the interaction with other players in maritime industry, safer ships mean better market value for the ships, lower premium for insurance, lower maintenance cost, higher operational reliability, less risk for needless stay in being caught by PSC, and then attract more shippers who need safe and timely transportation. Ultimately for shipowners, what they want to achieve is less lifecycle cost in ship operation. For flag states, they believe that the enforcement of safety standard in the form of strict flag state control does pay as well. With the better state of fleet safety, the flag would be ranked in white list, less targeted by PSC, and then the fleet detention record would be low, less casualty record, and finally will attract more shipowners to register their ships, which means more income from ship registration. This is the condition when quality flag states meet quality shipowners.

Another school of thought believes there is a market for price sensitive people that have low safety awareness. They believe that the willingness to pay would increase when the price gets lower. When the intention is to get the price as low as possible and safety is assumed only to increase the delivery price, reasonably safety factor will be excluded from consideration. The shipowner will find that the price of second hand old ships is cheap, and with some negotiation the previous owner finds that it is more economic to sell it and avoid high disposal cost in ship recycling. It is logic then if an aging ship, that needs higher maintenance and operational cost, is suffered to operate on low cost basis to attract price sensitive shippers. Roughly to say, the profit margin would be only enough to keep the ship in operation. To accommodate these dubious ships, the shipowners will also try to re-flag to a register that will offer more lenient safety regimes. It is assumed that primary motive for flagging out is assumed to be to maximize profit or conversely minimize costs (Det Norske Veritas et al., 2001). This is the condition where irresponsible flag states, that find demands for price sensitive registration, provide a solution for 'second-class' shipowners.

Unfortunately, the real world today is filled by both good and poor performers. According to EU THEMES project (2001), it was evident that different flag states have varying competence and motivation to undertake their role. In the principle of sovereignty, the maritime world can only give pressure in spite of getting them out of the business. As long as the gap in economy exists, there must be a demand for cheap solution for the world where safety is not a main concern. What the international regulatory regime can do is to eradicate the practice where safety can be bargained to compete with quality players. A study conducted by Seafarers International Research Centre (SIRC) of Cardiff University shows that the fleet of the new entrants open registries has a growth rate far above the average rate of the world fleet. In the search of quality shipping, Embiricos (2005) underlined that substandard ships have role in promoting unfair competition by saving costs⁷. To see that the competition is going unfair, and the quality players switch to irresponsible players because of its

⁷ Stated in Rome at the Mare Forum September 2005. See http://www.mareforum.com/mare_forum_2005_conclusions.htm

convenience would be a drawback to the society. To promote fair competition by fighting against sub-standard shipping is one importance of flag state control.

The second importance is ‘to right the bend’ or to put flag state control in its original position. There is a common misconception of safety layers in maritime world. To impose control on port state prior to flag state is certainly a big mistake. Imagine in archipelagic country where the shipping traffic is dominantly domestic, there is no control by port state. Does it mean that there will be a vacuum of control? Therefore, flag state control and port state control cannot be used interchangeably, but they are complementary. The growing powers on PSC regime does not mean that the flag state control can rely more on them and release their own obligations. It should imply as political pressure of low confidence to flag states in exercising their control. Therefore the port state finds there is a need in ‘naming and shaming’ (Spremulli, 2004). It is important for the flag states to exercise more control and be more responsible than they are today.

3.2.2 Considerations in flag state control

The method to exercise flag state control may be different from one state to others. As it had been explained before, the variation in competence and motivation brings variations in practice. However, apart from the willingness to control, the availability of resources also plays a significant role in the selection of method. There are general rules in this issue. Firstly, the size of the fleet does matter. The bigger the fleet is, the more likely it is that the control personnel and efforts to be more extensive. For that reason, no wonder that Panama in 1987 already employed around 400 inspectors at over 300 ports around the world, and not including the inspectors in USA and UK that were delegated to RO (Cowley, 1987, p. 131). Second rule is that the size of the fleet corresponds to the economies of scale in flag state control. With the example of Panama above, to employ and station inspectors around the world would be without long discussion, compared to their status as the biggest fleet in the world. In the case

of different administrations, let's say fleet within the size of Fiji, it would not be efficient neither to station inspectors abroad nor to dispatch inspectors every time inspection dues.

Third rule is, as had been explained in previous chapter, the more functions delegated to RO, the higher probability for flag state to lose control⁸. It does not mean that RO does not possess a control system or their system of control is not well-built, but the efforts for flag state control are just simply not the same with delegation as it is without delegation. With the statutory functions delegated to different entity (RO), they have to compensate the 'losing' function by doing more control.

Fourth rule is that there is a tendency that flag state will empower more resource in control after an accident. Even though this is a good sign of learning from lesson, it is a pity that they have to wait until the accident happened, than taking preventive measures. Not only for flag state control, even in EU the stricter measures were taken after Prestige and Erika accident⁹. In some cases, the control was temporarily taken due to high pressure from public, media, and international attention. The character of public fear towards risk is that they put their social trust (or distrust) in fore front, whether they have comprehensive understanding on the problems or not (Earle & Cvetkovich, 1995 as in Adams & Thompson, 2002). Thus, it is often that the measures taken by administration are beyond the reasonable limit. Frequently, when the motive is only to please the public, the stricture will loosen by the time that public anger fades away.

Finally, flag state control is more crucial where, for specific reasons, PSC is absence. When a country because of its geographical characteristics relies heavily in sea transportation, while most of the ships' traffic is domestic and those ships sail under the flag of the country, there is no control layer from PSC. In one side, they actually

⁸ See chapter 2.5. Later on also will be discussed in chapter 3.4.

⁹ See http://www.sjofartsdir.no/en/Fartoy_in_english/Port_State_Control/

have more freedom to decide on how to look over their domestic shipping, because it is a customary law that domestic ship inspection is under a country's self arrangement. Furthermore, there is no obligation to inspect those ships under any PSC regime and there would be no statistics published that is shaming their performance. On the other hand, it is crucial because of the need of safe transportation both for mobilization of people and inter island trade, and they need actually stricter control for their ships to not pollute their domestic waters. At the same time there is only one control that exists, and that is flag state control, without the help of PSC. In short, the flag state control is even more needed because it is their ships, their people, their goods, and their waters. Countries like Indonesia, Philippines, Bangladesh, and Japan are countries that belong to that group.

3.2.3 Flag state control in Archipelago Country, Indonesia

As already discussed, flag state control becomes more vital where the PSC is absence. In the context of Indonesia, it is an archipelago country that consists of over 17,000 islands where goods are mostly transported with the means of sea transportation. In 2005 Ministry of Transportation published data, stating that there were a national fleet of 6,689 ships and almost 95% sail in archipelagic waters. In addition, the traffic was served by 725 seaports with 755,781 ships call, comprised of 9 million GT (BPS, 2006)¹⁰. It can be assumed that two third of the ships call were national flag. This is a very huge task of flag state control in terms of seaports involved, the number of ships, the number of calls, and the coverage area of operations. How to deal with this with only 500 national marine inspectors, who also carry out PSC inspections, is considerably a tough challenge, especially when those inspectors have obligation for PSC as well. Figure 3 is traffic of (only) passenger ships as a description of sea transportation network in Indonesia.

¹⁰ Based on data from http://www.dephub.go.id/admin/modules/Upload_File/files/bukuinfo.zip , <http://www.bps.go.id/sector/transpor/sea/yearly/table3.shtml> , and <http://www.sinarharapan.co.id/ekonomi/industri/2004/0915/ind1.html>

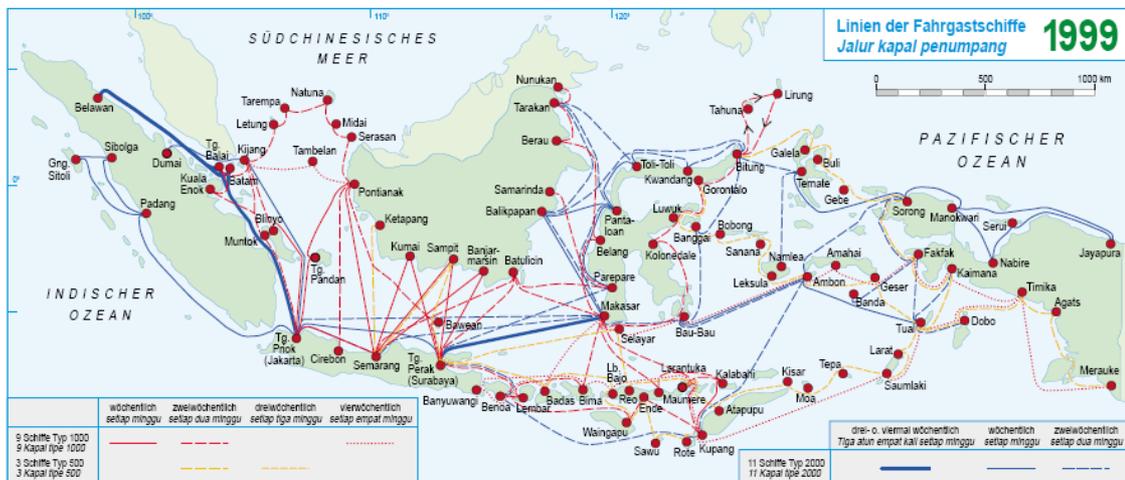


Figure 3. Passenger ships traffic network in Indonesia (courtesy of Meyer-Werft)

To deal with this challenge, there should be a strategic move to recruit more inspectors. The ratio between the number of ships call and the number of inspectors is noticeably low to a number of over 1500 ships call per inspector. Even the 500 inspectors have to be shared across 725 seaports, meaning that many ports do not possess their own inspectors. With current situation that no statutory survey was delegated except load line survey, the workload of each inspector is remarkably very high, since their main priority is the mandatory statutory surveys and not flag state control inspection. However in this Indonesian context where it is feasible to preserve statutory surveys in hands of national surveyors, it is an advantage that every ship is guaranteed to be visited once a year, thus reducing the need of flag state control inspection. It might not be feasible in case of full delegation to RO, since there is a necessity of flag state control inspection even tough it means double check for the same object.

In the case flag state control inspection is still needed, some solutions may be affected. Either by mandatory pre-departure check or applying risk based inspection. The involvement in ISM audit may also become a good occasion to get impression on how well the company and shipboard management is, particularly in the area of maintenance management.

As a matter of fact, despite the absence of PSC in domestic waters, it should be easier for exercising flag state control in archipelago country that is served by a dominantly national fleet. Because of the ships make many calls in national ports, the national inspectors can visit and monitor them often. It is needless to dispatch or station inspectors in foreign countries, thus it would reduce the effort to conduct monitoring abroad. For Administrations that have more fleet in international service, they have to distribute national inspectors to in-house PSC and flag state control abroad. While in Indonesia case, the national inspectors who are often both PSC and flag state control inspectors, can be better managed to do both tasks efficiently, thus enabling more number of inspections.

In relationship with RO, Administration can conduct flag state control inspection without involving any RO, consequently supervision for adequacy of inspection is relatively easier since they just have to control their own inspectors. This arrangement also has advantage in education investment for national inspectors. It is a self investment for Administration's own inspectors. The inspectors also become more mature and experienced with their high frequency in visiting ships, both for PSC and flag state control purpose. In an environmental protection issue, when flag state control is conducted in foreign countries, it is their waters that mostly benefit. While in domestic case, the careful inspection of national fleet also contributes to preserve the domestic waters environment.

3.2.4 Questionnaire on flag state control

For the purpose of this study, a set of questions in form of questionnaires were distributed to ten Administrations¹¹. Only three of them returned back but with significantly comprehensive answers. The questionnaire mainly aims to get the

¹¹ See Appendix 1, 2, and 3.

overview of Administrations practice in monitoring RO, on how Administrations established a monitoring system as required by IMO Resolution A.739(18).

While these three Administrations objected to be quoted, they can be called as X, Y, and Z. In Paris MOU, X and Y are in white list and Z is in grey list. While in Tokyo MOU, X and Z are in white list and Y is not on the statistics since the number of Y flag PSC inspections is less than thirty in 3-year period.

While the summary of questionnaire result can be found in appendix, it is needed to highlight some points here. Those three states do not delegate the statutory functions fully to the RO, in other words the delegation is partial. X Administration still retains passenger ship safety surveys and certification, most probably because they want to take care of the sensitive issue of human lives. Some states in the world also take similar policy regarding the passenger ships, on the strong public sensitivity on passenger safety. Y Administration preserves the safety equipment and safety radio surveys for cargo ships. This policy ensures the Administration to at least visit their cargo ships once a year. Some delegated surveys were also restricted to periodical surveys and endorsement, but not to the issuance of full term certificates. However, the policy still looks feasible since their fleet of over 1.5 million GT mostly export and import by making calls to their ports. While Z keeps the tonnage survey and certification, on the hands of their national Administration. It is relatively unique that an Administration holds a non safety and non periodic survey instead of regular safety survey that allows periodical visit. A tonnage survey is commonly performed at the beginning, when a ship enters the registration. However, the survey allows an Administration to have a general impression on the ship condition.

Concerning checking the adequacy of RO works, the three Administrations state that there is no limit for expenses on random inspections, at anytime the need for random inspections arises. Z Administration mentioned that statistically they conducted ten random inspections a year, which is quite a few. This policy, of not specifying the budget limit for random inspections, may be associated with the country's focus on

quality at any cost. No wonder that their flag is ranked among the best in Paris MOU and Tokyo MOU.

X and Z admitted that they ever sent warning notice to RO, to remind them the importance of better performance. However as a preventive measure, X, Y, and Z also stated that they monitor RO continuously by audit. The scope of audit is quiet similar, administratively on quality, technically by visiting offices and ships with historical deficiencies. On the quality system most of them assumed that IACS QSCS is beneficial but the Administrations need to audit RO to ensure it by themselves.

Finally, Y and Z view that there is a necessity for IMO to develop a flag state control system, particularly in area of RO monitoring. This system is useful for the reason of uniformity, commonly accepted and globally used by member states. Therefore, in their opinion IMO should produce guidelines. X surprisingly has an opinion against that idea, but unfortunately without specific reason. However, it does not mean that X wants to dispense their obligation since X is in the white list of two leading PSC regimes, Paris MOU and Tokyo MOU. Certainly, they are in position that needs no assistance in exercising RO monitoring. In their comments, X stated that RO monitoring is not as complicated as ships monitoring, due to the circumstances that the ships operate under tight schedule and often in remote locations. To maintain fleet quality and balance it with constraint ships operation absolutely needs good management. Additionally, Administration X strongly believes that there is no inverse relationship between the strict monitoring and the declining market of ship registration. They even added that shipowners support measures taken by Administration and respect them as responsible flag state, and also consider the flag state as a reputable one.

3.2.5 Associated costs

According to three flag states under the survey above, all of them implicitly stated that the cost associated with RO monitoring and flag state control inspection is not

specified. In some countries the tax is used in funding the expenses. When a ship intends to join a register, it is common to have a payment of registration fees and periodical tonnage tax. Once the ship is registered, automatically control obligation and expenditure leans under the Administration shoulder and shipowner obligation is under the area of daily maintenance and operational requirements. However, in some states Administrations may charge fee for unscheduled inspection, when it deemed necessary. Frequently the inspection is carried out right after serious detention or after receiving information from RO that ship is suspected in less satisfactory condition. In this case, whether it is an inspection performed by RO surveyor or national inspector, it is common that the shipowner bears the cost.

In case of Hong Kong, it is a combination of free and charged inspection. It is a free inspection for the first time only. Anytime Marine Department receives information about ship detention with serious deficiencies, the Director has right to dispatch national inspector to the scene for special inspection. The coverage of inspection may be broadening into an audit of ISM to check whether it involves poor safety management or not. Yet, it is not always free. For any reoccurrence shipowner has to pay the bill¹², which usually includes transportation, accommodation and hourly charges. The first free inspection is a kind of basic protection and warning, so that shipowner would pay more care to their ships to prevent subsequent inspection that is charged.

Panama is somewhat different as the additional inspection is not unscheduled but run on periodical basis. Panamanian Administration adopts mandatory Annual Safety Inspection (ASI) also charges a fee, namely the annual inspection fee. The fee is based on ship type and its gross tonnage¹³. It can be presumed that it is the price that shipowners have to pay to obtain a certain degree of protection from flag state. Whatever method is applied, whether free, charged or semi-free, it is upon individual flag state discretion, which may differ from one flag state to others.

¹² Refer to information in http://www.mardep.gov.hk/en/pub_services/sec08.html

¹³ See http://www.offshoreinfo.com/panama_yacht_registration.htm

3.3. Port State Control

The concept of PSC is as next safety barrier after flag state control. As the competition among flag states gets tough, it motivates the flag states to 'offer' another advantage other than financial, namely technical. This is the condition that port states want to anticipate by providing another safety net. Ships are inspected to check the conformance between the certificates and the real conditions. In the worst scenario, ships would never be allowed to leave the port before having the deficiencies rectified.

Hare (1995) stated that the concept is not new. Article 25 of UNCLOS 1982 empowered states, whose ports were used by vessels to take necessary steps to prevent any breach of the conventions. Article 216 and 218 enable port states in taking measures to combat international anti-dumping and anti-pollution. Similar to provisions of flag state control that can be found in major IMO conventions, provisions pertaining to PSC also can be found there. The tone of SOLAS 74 Protocol 88 Regulation I/19 is analogous to MARPOL 73/78 Annex I Regulation 8A and regulation 15 of Annex II, LOADLINES 66 article 21, STCW 78 article X and regulation I/4, and TONNAGE 69 article 12. In addition, there is also IMO Resolution A.787(19) Procedures for Port State Control, as amended. Besides safety and environmental side, security matter is also subject to PSC according to SOLAS Regulation XI-2/9.

PSC is now regarded as more than technical movement, but also embeds political issue when the publication of flag states performance also press flag states to be morally more responsible. The publication may act as diplomatic vehicle in conveying message: we request you to follow the achievers, or do something if you do not want to be ashamed. However, this attempt is not always effective since the statistics shown that poor performers are considerably still the same old players.

Basically, the PSC movement is very logic. In case any serious damage occurs to the ships, it is the coasts of port states that are threatened most, not the coasts of the ships flag state. Even sometimes the flag states, if landlocked countries, do not have any coastline. In addition to environmental issue, in many cases port states have to provide search and rescue operations, medical assistance, towing and salvage, because of the lack of control from flag states. This may cause considerable efforts that port states want to minimize.

That is the rationale on why the development of PSC is some steps ahead of flag state control. There is a significant interest for national physical protection, the interest that is considerably low when it comes to flag state control. In the development, this interest is shared with other port states. The regional cooperation promised more effectiveness since the risk could be reduced in regional basis. This is the regional spirit that inspired the establishment of Paris MOU in 1982 and other following PSC MOUs.

Up to now, there are nine regional PSC regimes, namely Paris MOU (Europe and North Atlantic region), Acuerdo de Viña del Mar (Latin American region), Tokyo MOU (Asia-Pacific region), Caribbean MOU (Caribbean region), Mediterranean MOU (Mediterranean region), Indian Ocean MOU (Indian Ocean region), Abuja MOU (West and Central African region), Black Sea MOU (Black Sea region), and Riyadh MOU (The Gulf region). US Coast Guard is considered as a non regional but single independent PSC. Unfortunately, the method and enhancement between one MOU and other MOUs does not proceed to the same level. There are many similarities between Paris MOU and Tokyo MOU, including the more advanced statistical use of excess percentage in 3 years period. However, Indian MOU, even though it uses 3 years period data, adopts a more simple statistical method such as percentage and average, and do not possess white, grey and black list flags. Some MOUs do not even have any website for the public to access the PSC records¹⁴.

¹⁴ As of August 14, 2007 they are Abuja MOU and Riyadh MOU, while Carribean MOU website is not well updated.

3.3.1 Problems

Many experts in maritime safety consider PSC as significant step forward to reduce the casualty rate. It may be true since the statistics from Paris MOU shows even though the method in targeting ships is more sophisticated that the number of deficiencies, the number of detentions, and proportion of detentions to inspections has been decreasing since the year of 2000 (Annual Report 2005, p. 29). This is a very good indication that there are more visits by quality ships in this geographical area for 6 years period in a row. However, it does not imply that the problem of substandard shipping is reaching to an end.

As the ships move globally, to rely on one PSC regional statistics may mislead the whole world condition. In comparison for Indian MOU, though less number of inspections in 2006 than previous year, the detention percentage shows an increase number (Indian Ocean MOU Secretariat, 2007, p. 9). As data of 3 years period 2004 to 2006, the percentage of inspections with deficiencies to number of inspections is 54.25%, 55.15%, and 55.34% respectively, or shows an increasing trend. In addition, the percentage of detentions to inspections is 7.92%, means that it is still higher than 3 years average.

Looking at statistics from another PSC MOU (data from Annual Report on Port State Control in the Asia-Pacific Region 2006 (Tokyo MOU Secretariat, 2007)), it can be calculated that from 2004 to 2006 the percentage of inspections with deficiencies is increasing year by year 67.27%, 68.48%, and 68.78%. While for every inspection with deficiencies, the average number of deficiencies is 5.08, 5.17, and 5.40. It shows the rising trend that more deficiencies can be found in every inspection with deficiencies. A quote from page 10 of the report says that: "The detention rate of ships inspected was about 5.40%. Compared with the last year, the detentions rose up slightly in 2006, with 74 in number or 7% in percentage."

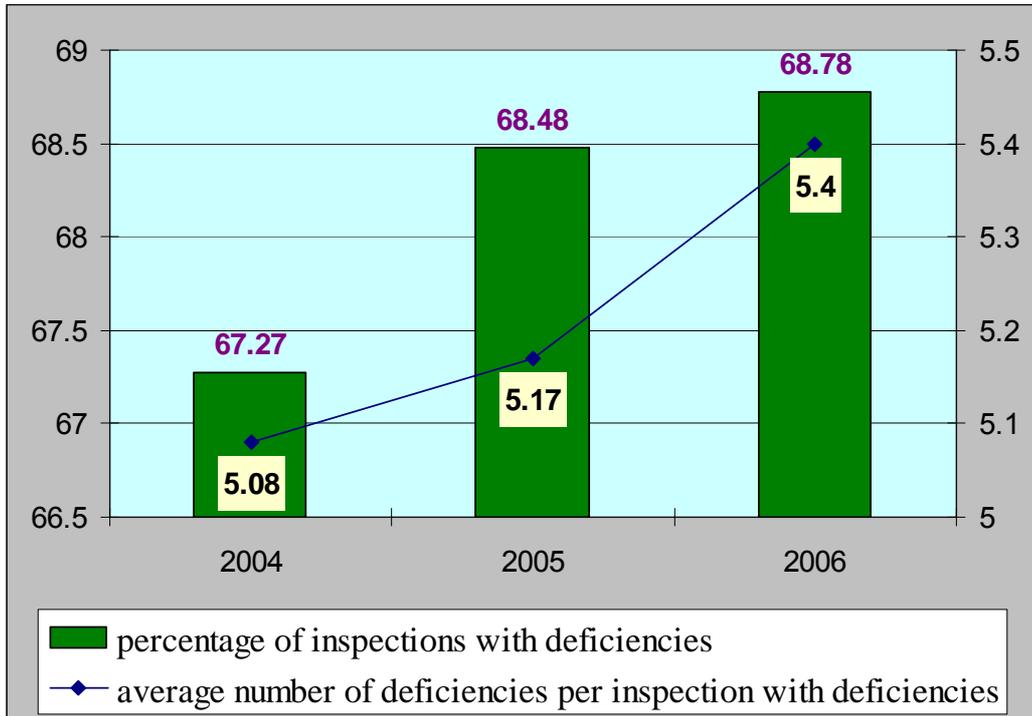


Figure 4. Tokyo MOU deficiencies record 2004-2006

What can be indicated from those statistics? The system is good enough in suspecting ships to be inspected. It is widely known that Paris MOU has the best resources compared to other MOUs. They also have a practice with minimum variations and follows common standard. Most of Paris MOU members are listed in white list. In other words, when they really enforce the standards among themselves, they will have common interest to protect their waters from outsiders with poor performance. In relation to the statistics from various PSC regimes, it indicates that when a PSC in one region is more rigorous than the others, it is more likely that shipowners will assign more quality ships to trade in that area to lessen the risk of being caught. As a consequence, it is natural that the less quality ships will be operated in areas with less stringent PSC. This phenomenon is called ‘balloon phenomenon’, it occurs when you press balloon in one side, it will be blown or get inflated at the other side. That is the reason why promising statistics in one MOU might be an alarming statistics in other MOUs.

If the above problem pertains to shipowners reaction to PSC, another problem arises related to flag states' stand point to PSC. When Tokyo MOU regarded PSC as measures complementary to the flag State control¹⁵, flag states often have their own formula. The assumption is that global control value, which consists of PSC and flag state control, should be constant. Thus when the PSC is absent e.g. domestic shipping, global control value is equal to flag state control. At the other condition hence international shipping where PSC exists, the value of flag state control may be diminished since it would be compensated by PSC.

Unfortunately in today's era when the trend of PSC is stricter and becoming stronger, then, to keep the balance flag state control tends to react more relax. Consequently, every step forward in PSC developments could be regarded as a signal for the flag state control to step back. This equation can be true but to lean the initiative on PSC only may bring a drawback to the equation. In international shipping there is a condition that is not expected, and that is when the proportion of PSC is more than flag state control, or even worse when flag state control is very small. Ideally, the proportion and quality of flag state control inspection should be more rational to reduce the effort of PSC.

The assumption is not totally incorrect if the sharing of control is followed by the sharing of costs between PSC and flag state control, which could be described as a compulsory sharing of the costs of FOCs over the whole industry (Spremulli, 2004, p. 40). Sadly to say that it does not happen. Most of the time flag states have not incurred any cost directly. It is always shipowners or operators who will grab their own pocket to rectify the deficiencies, and cost for any delay or longer port stay. Logically, their expenses are doubled. One for flag state to give a proper protection, a protection that they ought to be given but rarely received, and another expense is the risk cost of being targeted or the actual cost when the ship is detained. Surely quality operators expect more responsible flag states.

¹⁵ Tokyo MOU on "What is Port State Control" <http://www.tokyo-mou.org/state.htm>

This mind setting might be different for substandard shipping operators as they do not expect much from the flag states. Their cost consciousness encompasses very broad spectrum of cost system. It includes low cost of registration, low tax, low cost of crew, low cost of non compliance, which in turn will be compensated by high chance of detention, high insurance premium, high depreciation cost, and other high opportunity costs.

3.3.2 Effectiveness

It is commonly understood that PSC has less conflict of interests in conducting ship inspection. As had been reviewed before, the individual defence from outside threat is the main issue. It is their waters that they want to protect and those ships are not their own ships. Consequently no reason to provide relaxed enforcement while they can focus on finding the right method. The Concentrated Inspection Campaigns CIC is one of their innovations to target specific issue on ships. During specific period of time, hence from February to April 2006, Tokyo MOU jointly with Paris MOU inspected 4,603 ships focusing on the maintenance and procedures of MARPOL 73/78 Annex I¹⁶. From the shipowners side, the CIC is aimed to provide better awareness on specific issues. For PSC, the result of CIC was proven to provide better understanding on general treatment to CIC items on the ships side.

However, to review the existence of PSC, it is paramount to question the efficiency of PSC and whether it is still relevant or not. To answer such questions it might not be sufficient with answers based on rhetoric, but also they must be supported by data.

First fact is that the effect of shaming and naming has not been as effective as expected. Publication, seminar, annual report, and online database are already there but shamed parties (flag states and RO) just continue to perform less than expected without significant change. Even though no new flag states have joined the Paris

¹⁶ See <http://www.tokyo-mou.org/MARPOL%20Annex%20I%20release.pdf>

MOU 2006 black list, generally the flags in the black list are the same old players. Paris MOU called them as “hard core” flag states¹⁷. There are ten flags that appear both in 2006 and 1999 statistics, or they have been bad performers even since eight years ago. In addition, there is a similarity between Tokyo MOU and Paris MOU, where six flag states appear in both MOU 2006 black lists¹⁸.

Second fact is the interpretation on the fact that flags in the white list that is continuously growing, and at the same time the number of detentions and deficiencies demonstrates a rise as well. Statistics of Paris MOU shows that in 2006 there are three states joined the white list and two others disappeared from the black list, compared to each three and three states in 2005. In 2006 Tokyo MOU shows similar result that three states are listed in white list and four states receive reward to move away from black list. This is a good indication that more flag states move towards better flag states and qualify as responsible flag states. In contrast, data of number of deficiencies and detentions move towards an increasing trend. If this symptom can be analyzed, there must be a rationale on the increasing of good performers while some “hard core” players just stay idle comfortably in their position in the black list, and why that total number of deficiencies is slightly increasing. One assumption is that more flag states become stringent to their fleet thus the level of ships compliance gets higher, but this usually takes longer time and not instantaneously affects the statistics. Another assumption is that is as result of ‘flag hopping’, meaning that less performing shipowners feel uncomfortable with the move of some flag states towards better quality. As these shipowners feel less convenient, they will change their vessels to flags that are more convenient.

To prove which assumption is true, the data from UNCTAD Review on Maritime Transport 2005 and 2006 is referred to. The extracted data is the fleet of some flag states that are suspected to be involved in ‘flag hopping’. It shows that three flag states with progressing track record in Paris MOU lost considerably number of

¹⁷ In Paris MOU Annual Report 2005 page 23, the poorest performing flags are DPR Korea, Albania, Tonga, and Honduras.

¹⁸ Namely DPR Korea, Honduras, Comoros, Belize, Cambodia, and Georgia.

tonnage, namely Cyprus, Estonia, and Romania. Their fleet tonnage shows a deduction of 12.40%, 14.72%, and 26.70% respectively. In total it comprises lost of 2,481,000 GT from 2005 to 2006.

The inverse condition occurs to a number of flag states in Tokyo MOU and Paris MOU black list. In 2006 these acute blacklisted flags obtained 11.29%, 11.93%, and 54.75% additional tonnage compare to previous year. They are Georgia, DPR Korea, and Comoros. It aggregates a tonnage of 457,000 GT. It is quite small, but the number does not include the tonnage gained by Cambodia, as a result of unavailability of data. Panama, as the Paris MOU blacklisted flag in 2004 and the flag in margin line to blacklist in 2006, also gained a remarkable tonnage of 10,507,000 GT.

In general, this statistics of tonnage may not provide the real reason behind losing and gaining, as the total world tonnage is also progressing. However, it is a fact that quality shipowners will be less likely to register their ships in low reputable flag. Shipowners with relatively young fleet, with relatively maintained to standards, tend to register their fleet in quality flag as well, as their fleet need less technical convenience due to good condition. The probability is very low for the newbuilding or young fleet ships to join blacklisted flags. Then it can be concluded that the expansion of tonnage for the poor performers is due to they welcome flag hopping of ships, most likely to the reason of seeking registers that can provide less stringent control compared to previous registration. In short, it is an escape from strict flags to more convenient flags. That is why the fleet of Cyprus, Estonia, and Romania is shrinking while flags with poor performance are enjoying greater tonnage.

In the same mechanism, some flag states are boosted to white list due to the significant deduction of substandard shipping under their fleet. In contrast, some flag states become worst in their PSC records, enough to set them idle in black list. There is a losing of tonnage but gaining in quality, as well as gaining in tonnage but losing in quality vice versa. Another conclusion from the statistics is that the market of

good record flags and poor record flags becomes more segmented. Shipowners are helped with a wide range of choices in flags provided by the market. With the increasing number of flags in white and grey list, surely there is a widening gap between white list pole and black list pole, in which the dispersion is becoming less and less concentrated to the black pole. Moreover, the number of acute players is less, thus it becomes easier to target. The acute players' power should be reducing as well. PSC is successful in distinguishing between good performing and poor performing flag states. PSC achievement in pushing some flag states for better performance also must be congratulated, though not yet pulling out substandard shipping from the market.

Third fact is that the emerging power of PSC creates a condition where public expectancy on PSC is very high, which is a common mistake. More and more states become more selfish that they apply strict enforcement on PSC and empower more resources in PSC, while discriminating their ultimate responsibility on flag state control. This is a phenomenon that happens today. This trend brings a change in safety barriers order where PSC is located prior flag state control, which is a slip that is difficult to turn upward.

It is interesting that in Tokyo MOU, some members are very active in PSC while at the same time their ships are also being actively targeted by other members. In 2006 the inspection rate in Vietnam was 30.89% or still higher than other busy port states such as Hong Kong and Singapore who only at a rate of 13.95% and 12.01% respectively. They are also actively involved in Tokyo MOU committee, meetings, seminars, and trainings. At the same time it is an ironic that they are on their PSC regime's black list. Even though inspecting is easier than being inspected, this condition shows that the knowledge is not the main issue. The most probable cause is that the priority and effort given to PSC is not balanced to flag state control.

This is different compared with Paris MOU, that is more selective in accepting new member. Since most of Paris MOU members are EU members, they incorporate the

regulation on PSC in EC Directive 95/21/EC that is binding to EU members. Even for any new member of EU, this is a part of harmonization before a country can officially join the membership. This harmonization fosters better enforcement and uniformity in flag state obligation, not only in PSC but also in flag state control.

In Paris MOU, it is known that there are stages of membership. Before applicants receive full membership status, they should first pass as cooperating members. Cooperating members are subject to assessment on their fleet performance. They are also in close cooperation with Paris MOU and under assistance for managing their fleet better. As it had been displayed before, Cyprus, Estonia, and Romania experienced losing a significant tonnage. It is assumed as the effect of their effort on becoming quality flag states. This effort is partly the result from assistance and pressure given by Paris MOU in order to receive full membership status¹⁹. For Cyprus, they were in black list in 2003 and moved to grey list the year after. They did not wait for long, because in 2005 they climbed up again to white list and finally received full membership status in 2006. The provision that members(p. 18) must demonstrate an acceptable flag state record is a good model for the other PSC regimes.

Fourth fact is brought up by Spremulli by questioning: Is PSC driving the substandard operator out of business? He stated that in most cases when ships are detained, it would not take a long time to rectify the deficiencies and therefore the ships may proceed without delay. He concluded that: “it may well be cheaper to risk and suffer a detention than to prevent it.” The policy of ‘detained but not delayed’ may be counter productive in driving substandard operators out of business. Another argument, that PSC is not operating effectively, is based on the fact that a significant percentage of operators have no idea how bad their ships are or many of them believe that the chance of deficiencies being detected is minimal (Sanyal, 2004).

¹⁹ In Paris MOU Annual Report 2005 page 5 and 7.

In general, the climate of PSC today has not yet successfully combated substandard shipping and forced flag states to perform better. The effect of naming and shaming bad performers is not as it was expected. The black list states that share growing tonnage in world fleet is one of indications. Another problem that faced PSC is their internal problem. How can we expect PSC members to conduct another control, while they have difficulty in controlling their own fleet? Belize is under Caribbean MOU and Honduras is Viña del Mar member, but both are on the Paris MOU and Tokyo MOU black list. Indonesia, Thailand, and Vietnam are example of Tokyo MOU members that are also recorded in black list of their own PSC regime.

In the future, PSC should be driven as a means of pressure. Not only pressure for shipowners or operators, but also there should be a considerable pressure even among one PSC regime members. In operational practice, PSC may act as an agent of control of substandard shipping. In PSC meetings, the members should act as agent of control to other members. The cooperation should be extended from capacity building and information sharing, also to include support to the duty on flag state control. This is an extended interpretation that PSC is complementary to flag state control.

3.3.3 Associated costs

Generally, cost of PSC inspections can be divided into initial inspection cost and follow up inspection cost. It is common that initial cost is on the account of port states. However, in other cases there are other costs that have to be born by shipowners or operators. Costs to rectify deficiencies and costs for the competent authority to ensure that ship complies with the conditions from previous port of inspection shall be charged to shipowner or ship operator. It is similar to costs of inspection after detention, or inspection of ship leaving another port without prior lifting the deficiencies, will be charged to the owner or operator of the ship²⁰. This

²⁰ Malta Merchant Shipping Regulations Reg. 19 Reimbursement of costs
<http://docs.justice.gov.mt/lom/Legislation/English/SubLeg/234/38.PDF>

common practice is quite uniform for EU countries, as they adopt the measures contained in Council Directive 95/21/EC of 19 June, 1995 in its up-to-date version.

Knapp (December 2006) estimated that costs of PSC inspection is USD 747 per inspection. She also calculated costs of PSC inspections associated with zero deficiencies, which are accounted for 54% of all inspections, estimated to be at USD 12.5 million per year for the regimes used in her study. Those PSC regimes are Paris MOU, Caribbean MOU, US Coast Guard, Viña del Mar Agreement on PSC, Indian Ocean MOU, and AMSA. This huge amount of money and the existence of other inspections from private initiatives will lead us to global savings opportunity, which will be discussed in sub chapter 3.5.

PSC inspections with its implications may guide the shipowners to take into account other costs also, which are indirect cost. Even though there is a policy of avoiding unnecessary delay, detentions with delay would cause not only higher associated port costs, but also penalty for not arriving on time in the next port of call. The case of Probo Koala, which is famous for transporting and dumping waste illegally in Ivory Coast, may serve as an example on how expensive it is with delay penalty charge. Even though this case is not connected with detention, at that time the manager of Probo Koala would be expected to pay USD 250,000 for contractual penalties in case of ship's delay to arrive at its next port of call in Estonia²¹. This high amount explains why shipowners or ship operators perceive PSC as Frankenstein monster. PSC is simply viewed as a cost-burden on operators, because of requiring a major effort by ship operators, agents and crew to rectify at short notice seemingly minor deficiencies in documentation and equipment, listed by inspectors but actually of little importance to the safe operation of the ship or the health of seafarers (Bloor, 2003, p. 13).

²¹ Source from Spiegel Online 18 September 2006
<http://www.spiegel.de/international/spiegel/0,1518,437842,00.html>

3.4. Relationships between flag state control and PSC

As it had been described before, flag state control and PSC shall work hand in hand in their duties. The better flag state control is in exercising the duties, the lighter the tasks of port states are. Yet, this spectrum of work shall not work vice versa. It means that it is not the correct mechanism for the port states to work harder than flag states. In ideal it is a must for the port states to have a better life than flag states, for enjoying status as second filter and not as main filter. This emphasis of control in the shoulder of flag states may be well explained by recognizing their similarities and distinctions below.

The distinction between flag state control and PSC may not be significant in role, as both are acting as barriers in maritime safety and pollution prevention. The area of controlling is almost similar as well, covering ship structure, machinery, fire fighting, seafarers competencies, hygiene, safety management, and so on. The goal of the inspections is ultimately on eliminating substandard shipping.

However, there are some characteristics that distinguish flag state control to PSC. One is exercising their obligation, while the other one is exercising their right on deciding which ships can enter their ports. Flag state control arose as a manifestation of responsibility on looking after their fleet, on controlling whether their ships are seaworthy and the crews are sail worthy. This obligation is attached wherever the ships move. In case of PSC, it was established when port states considered that in order to protect their waters from threat, they need to control and select which ships may enter their ports. It is kind of self defence.

Scope and thoroughness between flag state control and PSC is also different. That explains why mandatory statutory functions commonly are called surveys, such as SAFCON survey or load line survey. A surveyor is a person who assures that the ship and its components comply with the respective regulations, and he or she proves it by the endorsement. It is reasonable then that a surveyor needs sufficient time and

work space for thorough look up. It is slightly different with PSC check, commonly called inspection. The nature of PSC inspection is a confirmation of surveys carried out by flag state surveyors.

Is there any relationship between the type of registry and PSC? Based on the merchant fleet distribution list issued by UNCTAD in its Review of Maritime Transport 2005, the proportion of ships over 100 GT under open registry countries constitutes 404 025 thousand dwt, aggregate to world total of 895 843 thousand dwt. This equals to 45.099 % of the world fleet registered under the umbrella of the open registry system.

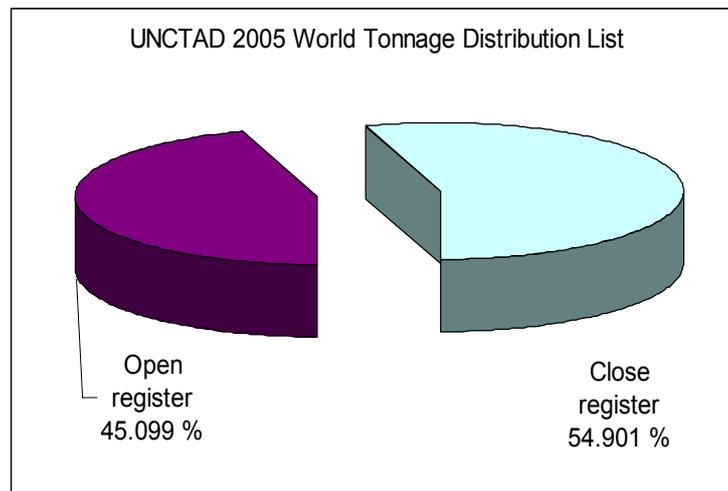


Figure 5. UNCTAD distribution of Merchant fleet of the world

At the same time, as a quantitative basis to study the relationship between open registry and substandard shipping, the simple statistics of detention reported by Tokyo MOU will be used. The use of the method is to sort the detention list by the flag state of the ship during 6 months, from October 2005 to March 2006. Later on, all of the flag states will be classified into two major groups, the closed registry states and open registry states. It is well-known that the open registry system is dominated by countries such as Panama, Liberia, Bahamas, Belize, Mongolia, Tuvalu, and Bermuda. The result can be seen in Table 1 and Figure 5 below.

Table 1. Classification of detention based on type of registry in Tokyo MOU

Month	Open register	Total Detention	Percentage %
Oct-05	83	112	74.11
Nov-05	69	84	82.14
Dec-05	61	74	82.43
Jan-06	42	63	66.67
Feb-06	76	94	80.85
Mar-06	111	132	84.09
Σ	442	559	79.07

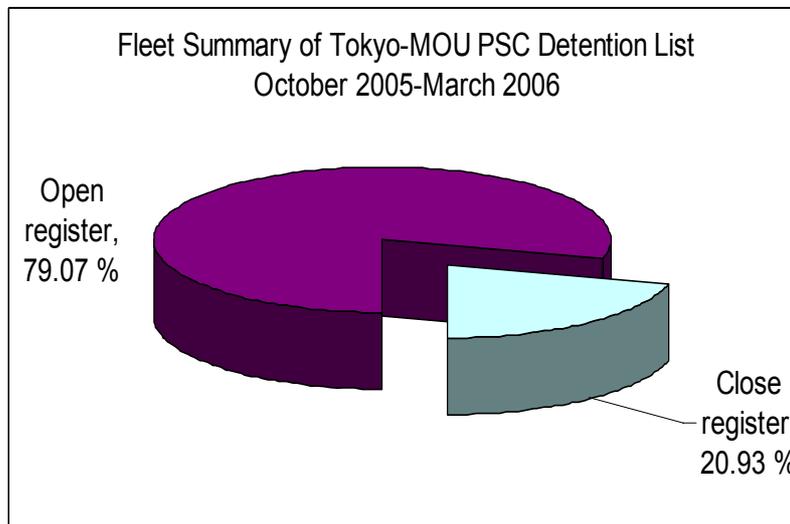


Figure 6. Distribution of detentions based on type of registry in Tokyo MOU

It is important to find the reason behind connection of above graphs. Cowley's indication may serve as an answer. He stated that flag state control is even more significant when the full delegation is adopted. In other words, the degree of flag state control effort is in line with the degree of delegation. He emphasized that procedures of flag state control are very necessary, as in general it may be said that Administrations which delegate all statutory functions have casualty rates above the world average unless special measures are taken. In fact, most of open registry states delegate all their statutory functions to RO. This extensive delegation, if not packed with extensive monitoring on RO, would probably cause the high number of detentions as shown in the statistics above.

The fact that most detentions were dominated by open registry states reveals that most of them have to improve their flag state control functions. This also indicates that if open registry states work harder in their flag state control, to the level that closed register states do, the detention may decrease significantly thus helping the port states effort in PSC inspections. Similarly the work of PSC would be tougher in inspecting ships where flag state control is absence.

The relationship between flag state control and PSC becomes more difficult when a problem of global non uniformity arises. It is commonly known that even for PSC incorporated under one MOU, the practice between the members is not uniform. This is true in a case when some members are better equipped and possess sufficient skilled inspectors, while some others are struggling with their resources. This condition could result in a ship leaving a member state with zero deficiency but being subject to detention three days later in another member state's port. It is the condition that triggers the PSC MOU also to focus on training, other than information sharing activities.

The challenge is even harder for fostering uniformity on flag state control, as there is no formal association on flag state control like on PSC, except in EU. The problem of practice that might be different from one country to others, as well as problem of implementation and enforcement is called 'implementation gap' by Global Integrity, an NGO on public administration based in Washington²². This problem had been addressed by other experts as well. Churchill and Lowe (1999, p. 273) stated that the problem is not on shortage of legislation on ship safety, but lies in enforcement and implementation which varies between flag states. This 'implementation gap' explains why that some flag states can perform better than the others.

In general, the relationship between flag state control and PSC is complementary. However, both are still living with their own problems. In a condition when the

²² See Global Integrity homepage <http://www.globalintegrity.org/data/2006findings.cfm>

degree of responsibility of each flag state is different, when some flag states more focus on commercial target than performance, when some flag states do not have sufficient resources to exercise control, it is difficult to minimize the room for substandard players. As an effect, PSC who is already more developed will take over the lead control and be more dominant than before.

The measure to expand PSC framework to collaborate more with flag states should be fostered. Since most of port states are also flag states, the forum may be extended on how to establish a mechanism where PSC and flag state control can work hand in hand, as measures taken in flag state control will reduce the measures needed for PSC, which will bring the global effort into balance or equal as before. However, the good effect is that more and more flag states will join the white list. More flag states would be categorized as responsible quality flag states, thus driving the trend in eliminating substandard shipping. Another benefit is to force landlocked countries to spend considerable effort for controlling their fleet, without gaining double advantage on the absence of need of PSC and simultaneously laying their flag state control obligation on PSC.

3.5. Resources and personnel

In sub chapter 3.2 it is clearly shown that the endeavour of flag states in exercising control differs and depends on competence and motivation to undertake their role. This sub chapter mainly discusses about the resources on managing control and exploring the opportunity for the control regime to become more efficient.

Apart from the willingness to control, where the lack of resources turns out to be the main problem, states have to distribute the available resources efficiently. This distribution of resources primarily depends on the characteristics of the states. Cowley (1987, pp. 130-131) stated that the longer and more vulnerable the coastline and the greater the number of ship visits are, the larger is the proportion of surveyor resources employed on PSC, even if the state only has a relatively small number of

fleet. The example of state belongs to this category is United States with their US Coast Guard. Similarly, a relative small country, or maybe landlocked, that have large merchant fleet the proportion of resources employed on flag state duties will be greater.

The problem arises when a state has to share its resources for both flag state control and PSC at the same time. Since flag state duties can be delegated while PSC duties cannot, delegation is the easiest way out in most of the cases. Some states just omit the fact that flag state control is mandatory and PSC is voluntary. They even manage their best resources on PSC.

In case of Vietnam, a flag state with fleet of 1,671,000 GT (UNCTAD, 2006), while managing to conduct PSC under Tokyo MOU satisfactorily, their fleet is also being targeted for being classified as black list flag in the same MOU. It is better for Vietnam to allocate their resources in flag state control first. The principle is in an umbrella of PSC MOU, when one member controls their fleet better it will help other members on PSC. The total use of resources under a PSC MOU also may be reduced.

The case of Indonesia is a different combination, where there is a lack of resources both in flag state control and PSC. From the total number of Tokyo MOU inspections in 2006, Indonesia only shares 0.27% compared to Vietnam 2.15%. While from the individual ship visits Indonesia accounts for 3984 compared to Vietnam 1366. Together with the fact that Indonesia is also in Tokyo MOU black list, it is very obvious that Indonesia has difficulty not only in resources for PSC but also for flag state control. This condition also frequently happens when the times that even very high-targeted ships are not inspected simply because no inspectors are available (Sanyal, 2004).

To cope with this problem, it can be tackled if states reshape themselves to become more efficient. Today we recognize a numerous kind of inspections, of which the area and objects are sometimes overlapping. These overlapping inspections open a

room for resource savings by avoiding multiple checks for the same object of inspections.

In a public side, under the cooperation within PSC MOU, port states can entrust pre departure inspection to flag state or to another port state, to ensure that the ship can smoothly arrive at other port states. This will avoid excessive inspections on ships, thus also can save considerable time and resources. Definitely, there should be a state of trust among the states in one PSC MOU.

Other solution for resources efficiency is entrusting statutory surveys or ISM audit on another capable contracting government. It is allowed by the IMO conventions to delegate surveys to other contracting governments, upon request. This solution will not only combine PSC and flag state control at the same time, but also combine the interest in it.

For the private side, there are a lot of inspections on the initiative of classification surveys, hull machinery insurance, P&I, and charterers. On the initiative of the Maritime Transport Committee (MTC) of OECD, they have over the past several years produced several substantive reports relating to these integration possibilities on inspections, especially in their Action Plan to Combat Substandard Shipping (2002). In the Shipper inspection schemes, they built a discussion with the managers of existing shipper inspection schemes on the scope for further integration and development of those schemes. They also encourage greater dialogue between the shipper scheme administrators, other organizations that generate similar information (such as IACS) and national administrations in order to improve and facilitate the flow of information.

In terms of monetary advantage, Knapp (December 2006) found that total inspection costs of mandatory and non mandatory inspections per vessel per year are estimated vary from USD 47,000 for tankers to USD 17,500 for other ship types, while the frequency of all inspections performed in the name of safety is estimated to be 11

inspections per year for tankers, 6 for dry bulk carriers and 5 for other ship types. These findings shown that there is a lot of room for savings time, money, man hours, and the savings might be even greater when between public and private side are combined.

The only obstacle on the integration is the lack of recognition in each other's work. Knapp again underlined that the lack of trust in industry between flag states, port states, classification societies, insurance companies and cargo owners has created a playground for many inspections in the name of safety. For PSC regimes, they can be more efficient if they recognized each other. Up to now, Paris MOU, Viña del Mar, Black Sea MOU, and Indian Ocean MOU, are observers in Tokyo MOU. Yet, they do not accept each others inspections. The roadmap ahead is towards the simultaneous combination on flag state control and PSC, global PSC, harmonization in procedures, training, targeting criteria, and a global database across global industry.

4. Methods of Flag State Control

4.1. Classifications of method

In this chapter, the methods of flag state control are discussed. The definition of methods in this chapter means the way in selecting ships for inspection, including aspects to consider in the selection. In the mean time, the scope of 'flag state control' term belongs to measures taken to ensure the fitness of the fleet to relevant regulations, specifically the non mandatory measures and non typical arrangement, such as additional inspections, participation in RO statutory surveys, and partial delegation.

The methods range from the simple one to the more complex one. Even though those methods are still feasible to be applied in flag state control, the chosen method should consider the need and capability of the flag states. In other words, there is no one best method that can be best applied for all Administrations. The small Administration, which is responsible for small number of vessels may find it hard to establish a world wide network of inspectors thus will select a simple method. The method does not have to be suitable with another method chosen by another small Administration but with big fleet, which mostly sail on international voyage.

The methods of flag state control may also have many similarities with PSC. It is true since both are closely linked. However, because PSC is more developed than flag state control, it is understandable if flag state control to some extent adopts PSC system for the reason of its sophistication. In fact, flag state control is also dealing with ship inspections, RO, and shall in serious cases use its power to prevent ships to proceed to sea. In the attempt to monitor RO, even EC Council Directive 94/57/EC Article 9 instructs that data of RO safety and pollution prevention performance records shall be derived from the data produced by Paris MOU.

The inspection approach may be classified into four categories:

1. Based on time interval.

Time interval approach provides three alternatives, as it may be either regular or irregular or both. This approach is closely related to the previous approach of proportion. When it is decided to inspect ships in certain proportion, a certain period of regularity must be decided as well. It is up to the Administration whether to inspect 50% of the entire fleet in a period of every 2.5 years or 100% every year, or other arrangements.

2. Based on initiatives.

Initiatives mean the inspection activity itself relative to time. There are three kinds of initiatives, namely Pro-active Preventive, Reactive Curative, and combination between both of them.

3. Based on target.

The choice is to conduct random inspection or inspection based on risk. Random in this category means without specific target and choosing ships to be inspected in random, without any specific preference. While considering the risk means that ships are inspected (or not inspected) based on the risk. The risk considers the type and age of the ships, RO, operators, and so on.

4. Based on proportion.

This approach is very basic and uncomplicated. The options are whether to inspect 100% ships in the fleet or any specific proportion. Specific proportion means an agreed percentage, such as 25% or 50%.

However, those approaches above are not exclusive and a combination is acceptable to fulfill the need of flag states. An example of the combination of proportion, time interval, and target approach is when 50% of passenger ships with age more than 10 years are subject to annual inspection.

4.1.1 Based on time interval

As it previously explained, based on time interval inspections are divided into regular, irregular inspection, and combination of both. The time interval of regular inspection must be decided right after a flag state decides to inspect their fleet entirely. Liberia is an example of flag state which subjects all Liberian flag ships for regular inspections, so called Annual Ship Inspection (ASI). Another country may have another arrangement. In 1987 United Kingdom had legislation that at least one survey every five years had to be conducted by one of the Department of Transport's surveyor. This decision for excluding RO might cost additional significant expenses for shipowners. Even though for a quality flag state the decision might not be popular but it gives significant reward to their performance record.

Irregular inspections cover a very broad spectrum of reasons. The Administration might choose irregular inspections because of the limited resources. Limited resources set a limitation in budget to conduct regular inspection. It is also possible that no sufficient personnel is able to inspect ships in regular manner, so that the Administration decides to have irregular inspections only when ships are caught by PSC. The limited resources might not always be the background. Oppositely, the existence of advanced tool in targeting ships to be inspected may simplify the task. The tool automatically selects which ships are meeting criteria for irregular inspection. Hong Kong Marine Department is one Administration, which is successful in building database and tool similar to that²³.

A combination between regular and irregular is also a viable solution. Whatever the choice is whether regular, irregular, or combination, an Administration must consider their fleet characteristics. If their performance record is satisfying, then there is less reason to conduct additional regular inspection. If the performance record is quite disappointing, they might better consider to have more frequent inspections. Performance record can be obtained from PSC annual report or other publications by

²³ From Hong Kong Shipping Register User's Handbook Section 8
http://www.mardep.gov.hk/en/pub_services/sec08.html

the initiative from private organizations e.g. BIMCO INTERCARGO ICS/ISF INTERTANKO Shipping Industry Guidelines on Flag State Performance.

4.1.2 Based on initiatives

From the flag state control action relative to time, it can be divided into Pro-active Preventive, Reactive Curative and combination between them. The typical reactive curative flag state can be characterized by being passive, not innovative, and in lack of initiative action. Only incidents or accidents would trigger them to take action. In a simple case, the flag state is focusing on rectification of PSC deficiencies rather than prevention. In a worst case, the flag state does not spend effort for prevention, but rather on next components of safety system, namely secondary safety actions such as salvage and tertiary safety actions, namely compensation (Boisson, 1999).

It is important for the Administration to be more pro-active preventive, and considerably spend more efforts there. This is not only in a sense of running the business in classical way, but also to always innovate and keep up with the change. An example is Hong Kong, with their pre-registration quality control system (PRQC) launched in 2003²⁴. The quality control even starts before the ships actually join the register, and enacts as a measure to prevent cases where some ships do not meet the required standards, although they have supposedly been inspected by RO in the change-of-flag survey. It is not only beneficial for the sake of safety, but also commercially praised by private bodies, such as INTERTANKO²⁵. Boisson stresses that prevention of accident is capital importance for several reasons. Firstly, the effectiveness of secondary safety action is in question when serious accident occurs. Secondly, present mechanisms for compensation only provide partial reparation of the injury suffered, particularly in the event of accidents, since in general maritime law provides a limitation of liability.

²⁴ See 'Shipping Register's pre-registration checks boost quality of HK-flagged vessels' <http://www.info.gov.hk/gia/general/200309/17/0917112.htm>

²⁵ See <http://www.intertanko.com/templates/Page.aspx?id=30311>

Therefore, it is advised that the combination of both pro-active preventive and reactive curative is adopted by flag states. Reactive curative is still needed in case the flag states fail to act as filter agent. In a past Mare Forum 2005 in Rome, with topic of Shipping in a Responsible Society, it was recommended for the shipping community to break away from a compliance culture that resists change, to one of continuous improvement and proactivity.

4.1.3 Based on target

To choose ships for random inspection is not recommended, since each ship has characteristics that are specific in type, specific in purpose, with particular classification, and operated by particular operator, which brings a wide variation in flag state's fleet. Random in a sense of no special criteria will provide a chance in getting good ship to be inspected, which is certainly fine but from the resource management may be a kind of waste. To visit good ships once a year in mandatory annual surveys is sufficient and additional inspection may not bring significant impact to their performance. In general, the statistics data is used in analyzing target, mostly from PSC statistics, casualty statistics, and private inspections statistics.

4.1.3.1 Targeting Ships

Even though we recognize term of substandard shipping, substandard ship as one of the components is still the main object for inspection. The aspects within a ship are also numerous and therefore only general safety related aspects will be discussed in this part.

From the type of the ship, it is a common misconception that tankers (oil, chemical, gas) are more vulnerable compared to other ship types. In fact, tankers are one of the safest. Most probably it is due to the strict operational requirements for tankers that are set by both flag state and industry initiatives such as insurance, classification

society, cargo owner, and shipowner itself. According to a research done by Lloyd's Register, tankers perform better than cargo ships. The statistics shown that small and medium size bulk carriers and general cargo ships are by far the types of ship most frequently detained, with general cargo ships proportionally four times the rate for tankers which have generally good record, being subject to the greatest political and environmental pressures (Spremulli, 2004, p. 43).

The annual number of mandatory and non mandatory inspections for general cargo ships is five, compare to dry bulk carriers and tankers which is individually six and eleven (Knapp, December 2006). The annual expenses for tanker inspections are also among the highest, with USD 47,000 compares to USD 17,500 for other ship types. Then it is no wonder that tankers are subject to public attention, which perceives the risk mainly by media without having in depth knowledge about the safety regime as a whole. Data from several PSC in 2006 such as Tokyo MOU, Indian MOU, and Paris MOU reveal the issue that oil tankers and gas carriers are among the less risky ships type.

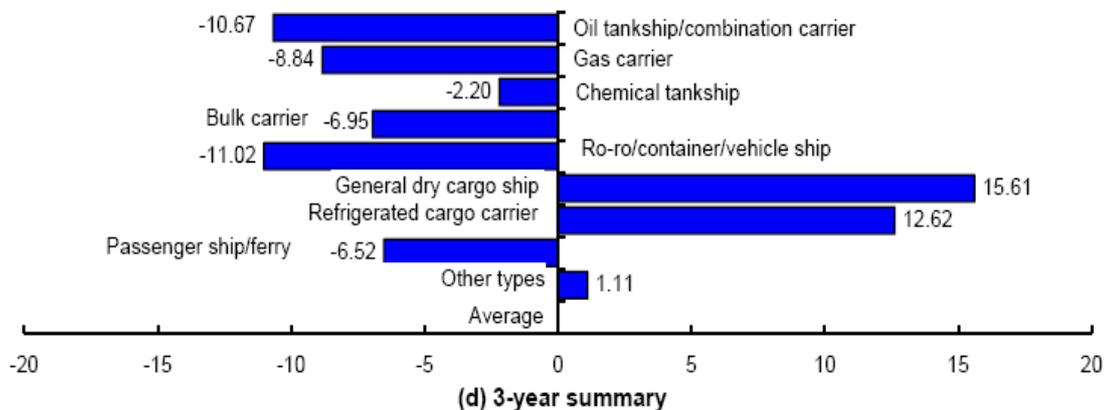


Figure 7. Comparison of inspections with deficiencies per ship type (Tokyo MOU Secretariat, 2006, p. 37)

It is important to include the reference from private bodies. Royal Insitute of Naval Architects (RINA) highlighted the findings of investigation of general cargo ship losses and associated fatalities relative to other types of ship in 2002. This study concluded that although general cargo ships account for nearly 20% of the world merchant fleet, they suffer over 40% of the total losses and almost 40% of the

fatalities. The study considered a fleet of 16,755 general cargo ships, comprising nearly 20% of the world fleet of merchant ships over 100 GT in 2000²⁶. This study has alarmed the safety regulators to pay more attention on general cargo ships. Even until now, there has been no concrete action taken to follow up this notice. In Tokyo MOU, general cargo ships have been the type of ship that has highest number of inspection with deficiencies above average since 2004 (Tokyo MOU Secretariat, 2007, p. 37). In the latest annual report, the comparison of inspections with deficiencies per ship type indicated that general dry cargo ships and refrigerated cargo carrier shows no trend for improvement. Moreover, in Paris MOU general cargo ships have not been classified as high risk ships. It indicates that serious measures have not been taken to respond the RINA submission.

Another aspect is ships' condition related to their age. The statistics from P&I clubs pointed out that for insurance purpose, the percentage of older ships to be surveyed is higher than younger ships (UK P&I Club, 1995, p. 15). It demonstrates the ships condition deteriorates as the ships get older. Perhaps, the combination of ship type and age and its relationship with the technical condition, inspires the EU Commission to issue 2001/106/EC Directive following the Erika and Prestige disasters. The concept of 'Mandatory Expanded Inspection' (MEI) and the term of 'high risk ships' in PSC were introduced in this Directive²⁷. The vessels subject to MEI are oil tankers above 3000 GRT and more than 15 years old, gas and chemical tankers more than 10 years old, bulk-carriers more than 12 years old, and passenger ships more than 15 years old (excluding those covered by the EU Ferry Directive 1999/35/EC). The vulnerability of high risk ships is also recognized in Paris MOU by adopting above Directive to its Target Factor calculation.

In general, flag state control may refer to statistics that is available when targeting ships to be inspected, based on ship type and ship age. Even though this targeting

²⁶ See 'Improving the Safety of General Cargo Ships' <http://www.rina.org.uk/iqs/dbitemid.422/sfa.view/page495.html> and ABS News Update June 2003 MSC 77th session <http://www.eagle.org/regulatory/regupdate/msc77.pdf>

²⁷ See http://www.sjofartsdir.no/en/Fartoy_in_english/Port_State_Control/

may not directly correspond to ships factual condition, it helps Administration on narrowing the suspected ships population thus maximize the probability in inspecting the substandard ships.

4.1.3.2 Targeting RO: Is auditing necessary?

In chapter 2, the related IMO instruments on RO monitoring are already discussed. As an extraction, RO performance indicators can be mainly divided into areas of Technical, Communication, and Management systems. Technical aspect receives the input data from PSC detentions, PSC deficiencies, flag state inspection, casualty statistics, and average age fleet. RO with less output in research and development may be assumed as possessing less technical capabilities.

In the scope of RO's communication performance, Administration shall ensure accessibility to RO information database, on time notification for serious cases (detention, ship unseaworthiness, class suspension), and on time survey report. In the practice within Hong Kong Administration, they consider on time copy of certificate and on time report on severe condition when ship cannot proceed to sea, as part of RO communication performance.

On the aspect of management systems, flag state may choose to audit RO. Under the umbrella of IMO, the model agreement MSC/Circ.710 MEPC/Circ.307 only offers audit of RO on non mandatory basis. The IMO model agreement only recommends the audit, not oblige the flag states. Even the audit itself may be directly conducted by Administration or by independent group of auditors. While in EU the requirement is stricter, and the Administration is prescribed to audit RO on biennial basis. In relation to this audit, the questions of effectiveness and efficiency are arisen. It might not be effective to audit RO in few days in few branches to get the full picture of RO management systems. Since the number of flag states is more than the number of RO, it might not be efficient if each flag state audits the same RO individually since it

will make them busy all year long. In addition, most RO are also quality certified and subject to be audited periodically. In case of RO who are members of IACS, the IACS Quality Management System Certification Scheme (QSCS) is already made mandatory²⁸. IACS QSCS requires that RO quality management system to conform with the requirements of ISO Standard 9000, EN 45004, IMO Resolutions A.739(18) and A 789(19), and other applicable standards (Villanueva Jr., 2004, p. 58). The QSCS itself is already run under continuous evaluation and in a report issued in 1996 by an IMO consultant, the QSCS programme was described as “substantially complete”, compatible with Resolution A.739(18), and its present development was judged positive (Boisson, 1999, p. 127). Will the audit by Administrations be useless and only create duplication?

The answer is yes and no. In the report of ‘Ships of Shame’, Parliament of Australia suspected that some RO were established by the flag states and carrying special mission to service a particular trade, type of vessel or flag state (Australia House of Representatives, 1992). This is the reason why sometimes audit by flag state is less useful. In this case, it might be reasonable to assume that external quality audit by independent external body is more objective.

On the other hand, audit is still relevant because some RO need additional pressure to boost their performance on system implementation. In Paris MOU annual report 2006, the performance of RO is remarkably wide in variation. Some RO just performed far better than others and some others are just extremely good. Moreover, we are not living in ideal world where everyone including RO are subject to commercial pressure and therefore, audit as a mean of control is unavoidable (Rueter, 1991). The purpose of audit is not solely to control, but in practice of some Administrations it is intended as a performance evaluation as well. Finnish Maritime Administration (FMA) conducts audit on biennial basis with the agenda of reviewing RO PSC records and to seek communication improvement between them (2001, p. 2). If a flag state decides on auditing RO, it is advised to avoid overlapping by not trying

²⁸ See explanation at <http://www.iacs.org.uk/document/public/explained/Description.pdf>

to replace a position of external quality auditor. Therefore, it is a general rule to compact and limit the scope of their audit as necessary.

4.1.3.3 Targeting Operator

Since substandard shipping encompasses broad definition, operators and managers are also included into the measurement. In reality, not all operators are willing to follow regulations in all aspects. Some of them are good in company policy and motto, but when it comes to practice they cannot execute their own policy due to attempt on cost savings. They are recognized as irresponsible shipowners or managers.

If we review their reason on substandard operation, most of them are targeting the market for 'cheap solution'. In other words, there is always a demand for service for price sensitive market. This pertains that willingness to pay of that market is not high, either because of less economic power or less knowledge on safety and quality.

In addition to the issue of substandard operator, from insurance general average statistics it is the bad shipowner, operating with old, substandard vessels, that totals the largest number of incidents (Boisson, 1999, p. 33). This fact emphasizes that the attitude of shipowner influences the safety value inside the company. Therefore the most practical way to rate the performance of operator is reviewing their ISM record, either the ISM related deficiencies in PSC record or the typical non conformities after several DOC audits.

4.1.3.4 Focus areas within ships, maintenance, and human factors

Since the broad coverage of ship inspection and the nature of inspection itself is less thorough than survey, it is important to spotlight the critical areas. For that reason,

another kind of risk targeting is to define the focus on ship inspection. It is an attempt to minimize the risk of skipping the existing deficiencies during inspections. In order to find the focus on ship inspections, it is crucial to close up on major deficiencies found during PSC inspections.

In Tokyo MOU 2006 Annual Report, the comparison of deficiencies by categories for 3-year period is displayed (p. 42). While the trend of discovered deficiencies is increasing, fire safety measures, safety of navigation, and life saving appliances are the top three deficiencies by category. In the fourth is stability, structure, and related equipment and then followed by load lines at the fifth. The summary can be seen in below chart.

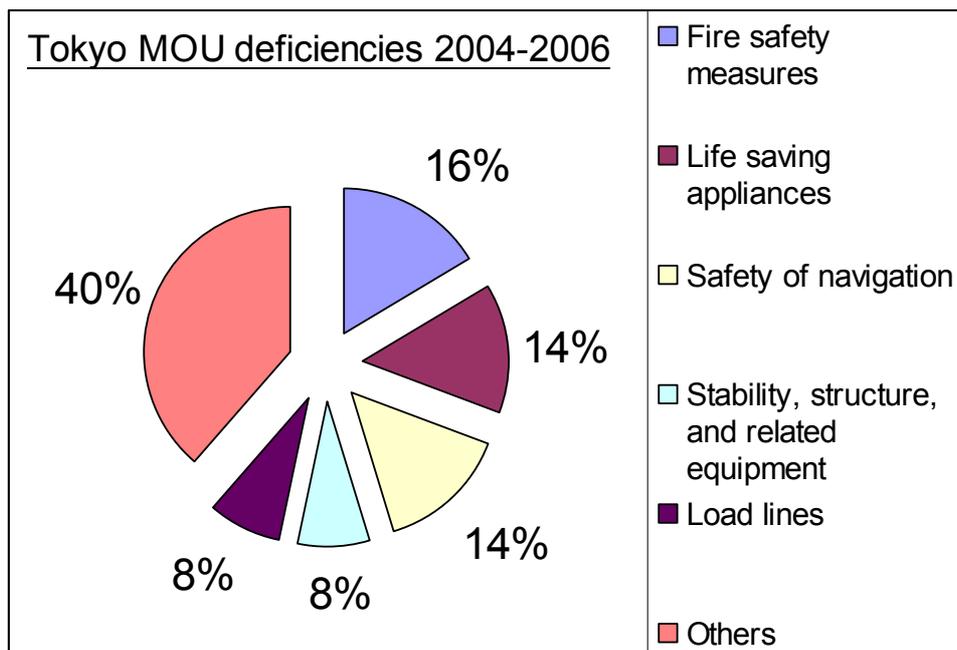


Figure 8. Major deficiencies in Tokyo MOU during 2004-2006

In addition, the statistics extracted from Indian MOU Annual Report 2006 also shows a similar result, in which the top five deficiencies are fallen exactly to those categories. It is remarkable to find that the pollution prevention measures under MARPOL did not constitute a major share to the top five deficiencies. This implies

that safety measures are more potential to be focus on, than pollution prevention or seafarers living condition.

The next question is to find the rationale on safety as the most deficiencies found onboard ships. One could argue that it is logic since safety items onboard are numerous and difficult to keep on eye of every single item. Another one could say that safety is the main concern of inspectors and they would be more focus on safety, so that the likelihood of safety deficiencies is higher. However, just like inspectors who try to decide area to focus, shipowners also set up priority in their operations and reasonably they would focus on revenue-earning items. Consequently, less priority is given to non revenue-earning items, which, nonetheless, may be critical to the safety of personnel, the ship and the environment (Spremulli, 1994, p. 43). Spremulli points out that these non revenue-earning items include life-saving equipment, fire prevention and equipment, cleanliness (accommodation and machinery spaces), and navigation equipment.

It would not be comprehensive to include the non revenue-earning items only on the expensive physical equipments. In fact, small size items which are simple but possess great importance on ship operations repeatedly neglected by ship operators. Figure 8 and 9 displays the fact during private initiative inspection, which safety procedures and ISM related items often are considered as less important to ship operations. Even though procedures are continuously used by the crew, their existence is easily forgotten and less maintained once the crews are getting familiar with the procedures. These procedures become emergence when there is crew change and the new crew needs to familiarize him/herself with the procedures that might be not exist in his/her previous ship.

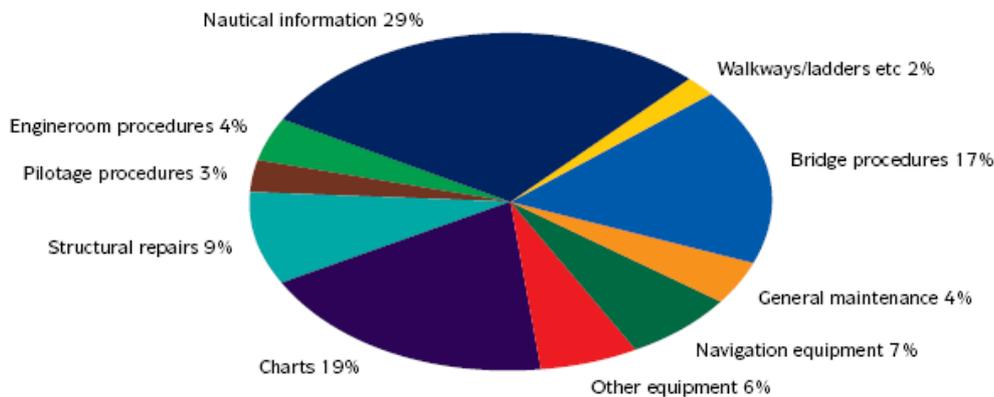


Figure 9. Service and maintenance shortcomings (UK P&I Club, 1995)

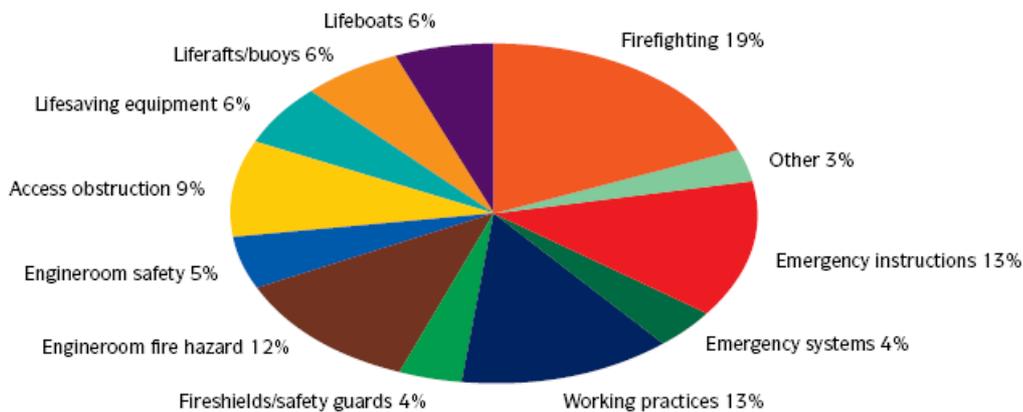


Figure 10. Shortcomings in safety standard and equipment (UK P&I Club, 1995)

Therefore, in the light of safety management it is vital to concentrate the inspection in the area of human factors. Crew awareness to safety culture especially the safety attitude, safety behaviour, and familiarization over safety issues may be observed from simple things such as the placement of flammable materials and the use of safety equipment during cargo operations. The idea to address human factors in inspection is supported by Australian Maritime Safety Authority (AMSA) inside the report of House of Representatives Standing Committee on Communications, Transport and Microeconomic Reform (Parliament of Australia, 1998, p. 32). The transcript from the hearing is: “... many of the problems we come across now in port state control do not relate to structural or machinery issues but rather to operational difficulties which reflect on the way the ships are managed and operated by their crews.”

In conclusion, whenever a ship is decided to be inspected, the flag state control inspector should optimize his/her time of inspection to assist shipowners improve the safety and environmental protection standards. Focusing on above top five deficiencies and non revenue-earning items may help inspectors' task. In addition, to combine the inspections with emphasis on human factor issues will bring great effect to safe ship operations as a whole.

4.1.3.5 Single criteria or multi criteria

Risk approach for the purpose of this discussion is a method for suspecting substandard shipping in attempt to improve the fleet performance. In the application of inspection with the risk approach, the criteria may be decided as single criteria or multi criteria. The single criteria may be based only in type of ships, age of ships, RO of the ships, or operator of the ships. Multi criteria is applied when more than one criteria is selected or when it involves one combination or more. An example of single criteria is to focus on type of ship with highest accident record, it is general cargo ships. Once the criteria is joined with another criteria, it is no longer single criteria but multi criteria. For instance focus on type of ship with highest accident record, which is classed by RO with worst detention record.

It has to be born in mind that the intention of having multi criteria is to guide Administration to highly suspected ships. Therefore the decision on which criteria to be used must be based on well-built hypothesis, otherwise the result may be misleading. The implications might be less probability on inspecting less good ships. The more complex our combination is, the less targeted ships there are in the population, thus the bigger the chance will be to inspect suspected ships.

4.1.4 Based on proportion

The option is easy whether to inspect all ships in the fleet or only partially. Panama is an example which all ships are subject to additional annual inspection, which partial inspections mean the inspections only cover specific percentage of the fleet, such as 25% or 50%. If the inspection is to cover entire fleet, the two factors to be considered are the size of the fleet and the size of Administration. It is noteworthy that the size of Administration must be ideally comparable to the size of their fleet, or the size of Administration shall linearly correspond to the size of the fleet. Even though these days the development of IT brings considerable efficiency in working load, the ratio of size of Administration to size of fleet does not change dramatically, due to the challenges and tasks of Administrations today are tougher than twenty years ago.

The variable of fleet size is an interesting topic to be discussed. In one side, the smaller the size of the fleet would simplify the task of inspection. It is logic since the number of ships is less then the task would be easier to accomplish. However, the question of economies of scale is arisen whether it is economically acceptable to inspect only a hundred of ships with the effort of traveling around the world. Imagine Austria a land locked country with 34,000 GT or Nicaragua 6,000 GT ships in total. The converse challenge is applied to flag states with huge number of fleet. There would be a little question about economies of scale, but the main dilemma is on how to manage inspections of those ships in additional to regular surveys. Bahamas with its 38,382,000 GT fleet is an example.

Commonly, the problems of higher ratio of fleet to Administration, the economies of scale, and the possibility to inspect huge fleet are answered with the existence of world wide network of RO and private surveyors. It is important to appoint RO other than classification societies, because of they are not normally used for inspection purposes as it may be considered invidious to have them checking the standards onboard a ship which they have dealt with statutory surveys (Cowley, 1987). Those RO and private surveyors are available as an efficient solution for flag states with any size of fleet. As an example, Panama employs private surveyors and additional RO to conduct control over their extensive 141,959,000 GT fleet. Administrations

can keep control over their fleet while reducing their direct involvement in technical aspect. However, in any circumstance Administrations should keep their organizations in reasonable size. The diminishing technical task means the emerging task of control management, both controlling the fleet and controlling the adequacy of RO works.

4.1.5 Combinations of approach

Based on our review above concerning the approach in flag state control, the inspection can be categorized into based on proportion (all or x%), based on time interval (regular or irregular), based on initiative (pro-active preventive, reactive curative, or both), and based on target (random inspection or risk-based inspection). Since this categorization is not exclusive, it means the combination between one approach to another approach is possible. An example of combination is if a flag state decides to conduct irregular inspection and then they pair it with preventive measure, and later on they can connect it with inspection based on risk.

The possible combinations between those approaches are drawn up in Figure 8. In total there are eight options that represented by six colours, namely blue, red, light green, dark green, yellow, and purple. For yellow and purple colour, each has two options since risk approached inspection can be done across all fleet or only on selected proportion. For instance of yellow colour, after a major ferry disaster the Administration decided to have one time (IRREGULAR and PREVENTIVE) thorough inspection on all ferries age more than twenty years (RISK) or only 50%. The proportion choices here are ALL or 50%.

Each line itself has double ended arrows to imply that the direction can move upward and downward. The choice may start from any point but once a colour has been selected, the choice must follow that particular colour. As an example, if an Administration agrees to only have curative inspection then there is no other choice

than dark green colour or combination between curative and irregular e.g only inspect ship after detained by PSC.

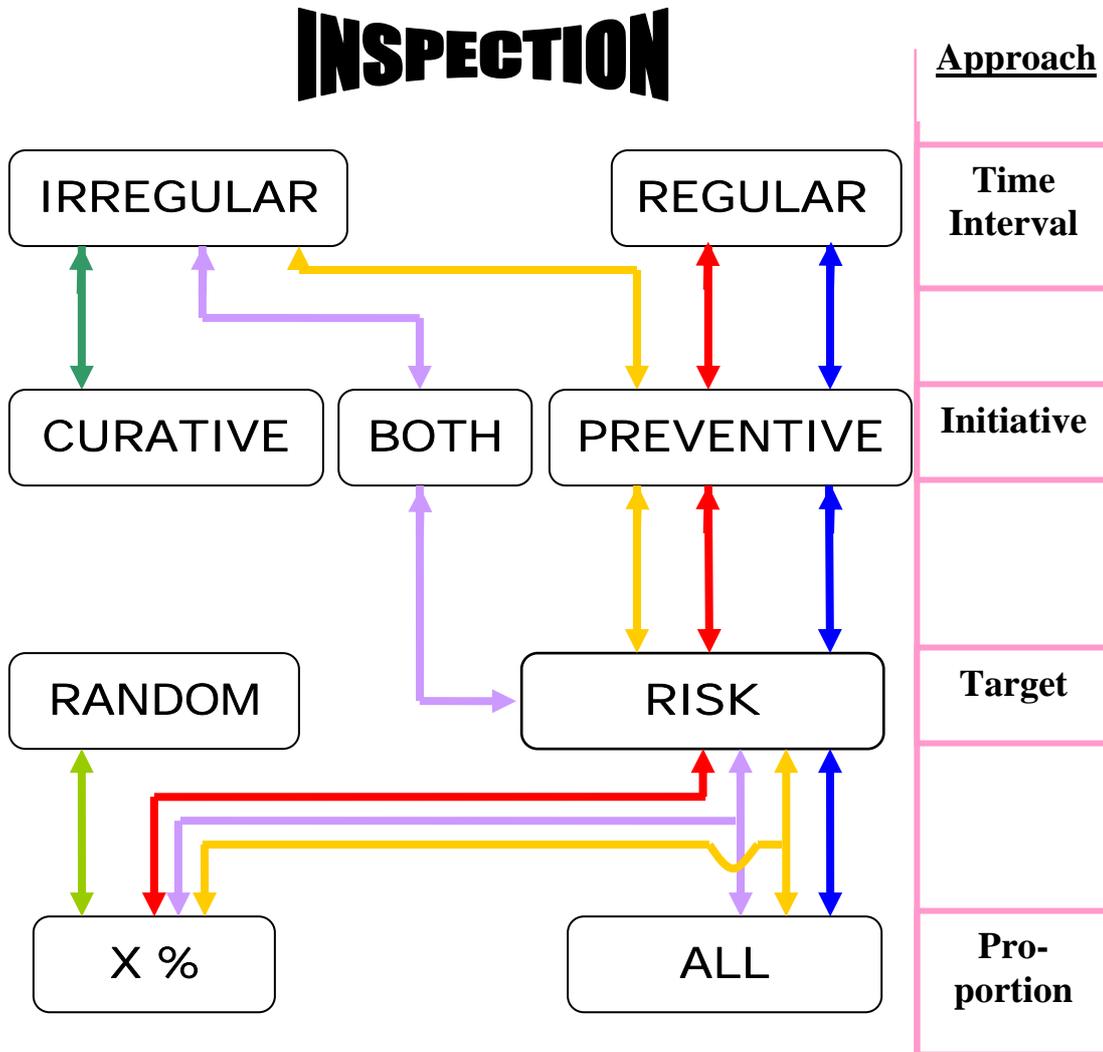


Figure 11. Possible combination among inspection approaches

Another example is an Administration’s response to 35% of their ships was detained for the reason of fire safety measures. Then an Administration decides to adopt RISK approached by having concentrated inspection on fire safety measures. The lines then go up to PREVENTIVE action. At this stage, there are still three colour options namely blue, red, and yellow. Since to have it regularly might get strong opposition from shipowners due to high additional cost, the Administration decided to conduct it

only once (IRREGULAR). Then now the colour is only yellow colour. Last decision to make is whether to have it on all ships or only on particular proportion (PROPORTION).

Administrations may decide which combination is more favourable to them, by considering the risk of their fleet, the necessity to have additional inspection, the input from shipowners, and so on. This diagram just provides option that should be a tailor customization to each Administration condition.

4.2. Choice of methods

Whatever the method or combination of method chosen by Administration is, it must meet the need of the organization. Drucker (1997) specifies seven conditions that controls must be met:

- they must be economical;
- they must be meaningful;
- they must be appropriate;
- they must be congruent;
- they must be timely;
- they must be simple; and
- they must be operational;

The Administration is advised to build their own system. Drucker mentions that the criterion of better control design is when it needs less effort to gain control. The fewer controls needed, the more effective they will be. Indeed, he says, adding more control does not give more control. Control must be meaningful in a way that the events to be measured must be significant e.g high age is more relevant than the shipbuilder. These criteria of control provide very good rules to be considered by Administration in selecting an appropriate method.

The establishment may start on set up the information on what kind of data would be needed to be analyzed. Then after set up of database, the system must be able to sort the data based on combination that is desired. For instance, all bulk carriers over twenty years of age that are classed by ABS and have been detained more than once in the last six months.

Next step is the definition of specific value that a ship falls into the criteria to be inspected. In a simple approach to reduce the number of targeted ships, single criteria or multi criteria as shown in chapter 4.1.4.5 may be adopted. If the more advanced system is desired, the system of PSC may be a good option that a target factor is developed²⁹. In general, the target factor is a risk scoring and it is divided into generic factor and historical factor. Generic means whether the characteristic of a ship are matched to criteria of being high risk. As an example is the high risk ships that match to mandatory expanded inspection (MEI) by EC 2001/106/EC. Historical factor is dynamic factors related to the record of ships in PSC.

In conclusion, it is important for the Administrations to keep the methods are suitable to their fleet characteristics, able to discriminating ships by their risks, not leading to over control situation and economically practicable. It is no doubt that every single new regulation issued by Administration is monitored by private sector. Again, in Mare Forum 2005 which was attended mostly by private maritime sectors, the attendants stated that they need to convince the regulators that their regulations are valid and relevant, that their impacts are properly tested, and that their results are practical.

²⁹ See the detail in <http://www.parismou.org/ParisMOU/Organisation/About+Us/Targeting/xp/menu.3955/default.aspx>

5. Conclusion

Flag state control is not a new issue but it is always an interesting topic to be discussed. The fact that it is an old issue but enjoy a less popularity than PSC is the reason why flag state control issue is interesting. Flag state control is also defined as an obligation that is mandatory to exercise, as the ultimate responsibility of safety and pollution prevention lies on the shoulder of the flag states, not on port states. Then why does PSC seems to be better developed than flag state control? The reason is simply because many Administrations pay more attention on PSC rather than on flag state control, due to public pressure and port states are more sensitive for the risk of substandard shipping than flag states are.

The challenges on Administrations in conducting flag state control may be temporarily overcome by the existence of RO. Especially in the recent situation, when the development of regulations is very rapid, it affects many developing Administrations, which are left behind the technology advancement, a problem which is not experienced by many RO. RO with their abundant resources can just stay ahead, since some of the IMO developments were just raised with the concern from RO. Some leading RO are very advanced in research and development. With the support of their vast network of resources, they can fulfil the need of Administrations especially underdeveloped Administrations with lack of expertise and infrastructure.

Therefore, no wonder that many Administrations are willing to delegate their obligations to RO. For traditional maritime states and developed maritime administrations, the reason is mainly for simplicity. They might not be forced in doing so, since basically they have possibility in exercising obligations by themselves. Yet, for the developing countries with developing maritime administrations, the delegation and authorization to RO seems as an unavoidable solution for satisfying both their national interest and obligations simultaneously.

Although there are some IMO resolutions regarding delegation, namely Resolution A.739(18), Resolution A.789(19), and MSC/Circ.710 MEPC/Circ.307, delegation and authorization are still issues which are quite liberally regulated. It is regulated by the existence of instruments that permits authorization and some provisions about general requirements. Most of them are requirements related with the technical competence and capability that must be possessed by RO. This assessment on RO qualifications does not come in package with self assessment of Administration. It seems that there are only a few requirements regarding the capacity of Administration itself. That is why it is liberal, in a sense that it does not prerequisite what kind of capacity an Administration should have after delegation. The release of technical obligations has consequence that Administration should be more active in control management level. Because even to control needs specific management skill related to set up target, performance measurement, performance evaluation, and monitoring issues. Delegation followed by improper control means losing control. The Administration's control skill would prevent both under delegation and over delegation. On the other hand, it is a liberal issue because it is up to the Administration whether to release full authorization, partial, or limited authorization regardless to the size and capacity of the Administration. There are less specific conditions to be met by Administration in order to balance the greater scope of authorization. In other words, it is regulated more on RO side but it is more liberal when it comes to Administration side.

As the control in public side is powered by flag state control and PSC, their existence is closely related and complementary. Their relationship is when one control is stricter, it will help another. The problem arises when the proportion of PSC is more than flag state control, or when PSC is more powerful than flag state control. This might be an unhealthy relationship since the ultimate control is on the flag state, for no reason that PSC may replace the power of flag state. Imagine in an archipelago country like Indonesia where PSC is absence in domestic shipping, the flag state should take all control functions by themselves. Therefore, the atmosphere of recent

control must be gradually shifted to proper position. It does not solely mean that PSC is less needed than flag state control, but there should be a development of joint framework between port state and flag state, where the sharing of responsibility is shared proportionally.

This framework might not be running smoothly as it is difficult to deny the existence of flag states that offer 'cheap solution' to the market, known as flags of convenience. They are really convenient not only in terms of fiscal, but also technical, which is a burden to the above mentioned framework. They are hated by one party but they are demanded by another party. At least they are existing and their existence shown to be a serious threat to society's safety endeavour. It would be difficult to expect them to exercise their control as flag states. The statistics also show that their fleet is growing, most probably because of more flag states are considering to be quality and responsible flag states, thus triggering 'flag-hopping' phenomenon.

However, this phenomenon should not be over worried since, in the number of individual states, the trend is decreasing. A smaller number of FOC means that greater pressures can be pushed on them, since most of the states are good performing states, thus they are more powerful. In addition, most of ships sailing under FOC flags are engaged in international voyage, thus they will always be subject to PSC. The publication of PSC report and flag state control report by quality flag states should continue, as an attempt for greater effect on 'naming and shaming'.

The greater challenge faced by society is the global PSC record and to collaborate more on the joint framework between PSC and flag state control. The harmonization of public control by flag states and port states will bring significant benefit. Not only financial benefit but also the efficient use of time for inspections, number of inspectors, and man-hours spent. It is also more effective in a way that sharing of information will reduce the overlapping in inspections, since recently inspected items will not be inspected in the next inspection, thus in total the coverage of inspection would be broader. Efficiency and effectiveness of inspection will help

Administration in spending and distributing their resources better. From the private side, less overlapping inspection means more operating time for ships and crew, less time in port, and less expenses.

As another form of collaboration, flag state may adopt the method of PSC to be applied in flag state control. It is a fact that PSC has more advanced tool in targeting ships for inspection. The methods available for flag state control can be classified into four approaches, namely based on time interval, based on proportion, based on target, and based on initiative. However they do not live as separate entities, as the combinations between more than one approach is possible. The selected combination of methods by flag states should fulfil their need, match to the characteristics of their fleet, and consider their available resources as well. In the end, the integration and joint work in control between port states and flag states logically will benefit the maritime safety and environmental protection, and the society as a whole.

Appendix 1. Returned questionnaire from country X

Position

Senior Surveyor/Cargo Ships Safety Section

1. Does your country adopt open registry system?
 Yes X No
 2. How many Recognized Organizations RO act on your behalf?
9 ABS, BV, CCS, DNV, GL, KR, LR NKK, RINA
 3. Does your administration delegate all statutory surveys to RO?
 Yes X No, still retain a number of surveys namely...
Passenger Ships Safety Certificate
 4. Does your administration leave all delegated surveys to RO surveyors?
X Yes No, a few surveys have to be accompanied by flag
state surveyors, namely....
 5. Does your administration follow IMO Res A.739 (18)³⁰ as guidelines?
X Yes No
 6. Does your administration assign some personnel to conduct random inspection
in ensuring sufficiency of RO work?
X Yes No
If yes, how often?.....When situation arises
If yes, how much is the budget allocation for random inspection?.....As necessary,
No limit
 7. Has your administration ever warned any RO for inadequacy of work?
X Yes No
 8. Has your administration ever suspended the delegation to any RO?
 Yes X No
If yes, in what case?.....
 9. Does your administration have any RO monitoring system as prescribed by
IMO Res A.739 (18)?
X Yes No
If yes, can you describe the system?
 10. Do you think that it is emergence to have a common accepted monitoring
system for administration?
 Yes X No
If yes, should IMO provide guidelines on it?
 11. What does your administration do to related RO concerning the ship detention
by PSC?
-

Find out the cause and ask the RO to propose corrective and preventive actions.

12. Has your administration ever conducted audit on RO?

Yes No

If yes, what is the focus on audit (safety, technical, quality)?
Anything which relates to the deficiencies identified.

Do you think that RO quality system (ISO 9000 or IACS QSCS) is sufficient?

No, flag State monitor is necessary

13. Does your administration rate RO based on their performance?

Yes No

If yes, can you describe the method? performance indicator as published in the MOU's annual report

14. Is there any relationship between RO bad performance and stricter monitoring by administration?

Yes No

15. Does your administration assign specific unit to monitor RO?

Yes No

If yes, is there special skill needed for the personnel?

16. Please fill in the space below if you have any general comment regarding the RO monitoring system, its difficulty or challenge?

Economically, does it attract more shipowners to register their vessel?

Yes, in fact responsible shipowner would welcome a responsible flag State. Strict monitor would make shipowner consider that the flag State is a reputable flag State.

Appendix 2. Returned questionnaire from country Y

Position

Senior Maritime Inspector

1. Does your country adopt open registry system?

Yes No

2. How many Recognized Organizations RO act on your behalf?

7

3. Does your administration delegate all statutory surveys to RO?

Yes No, still retain a number of surveys namely...

According to attachment.

4. Does your administration leave all delegated surveys to RO surveyors?

Yes No, a few surveys have to be accompanied by flag state surveyors, namely....

According to attachment.

5. Does your administration follow IMO Res A.739 (18)³¹ as guidelines?
 Yes No
6. Does your administration assign some personnel to conduct random inspection in ensuring sufficiency of RO work?
 Yes No
If yes, how often?..... According to attachment.
If yes, how much is the budget allocation for random inspection?..... As much as needed.
7. Has your administration ever warned any RO for inadequacy of work?
 Yes No
8. Has your administration ever suspended the delegation to any RO?
 Yes No
If yes, in what case?.....
9. Does your administration have any RO monitoring system as prescribed by IMO Res A.739 (18)?
 Yes No
If yes, can you describe the system? An audit every second year.
10. Do you think that it is emergence to have a common accepted monitoring system for administration?
 Yes No
If yes, should IMO provide guidelines on it? Yes
11. What does your administration do to related RO concerning the ship detention by PSC? Cooperate.
12. Has your administration ever conducted audit on RO?
 Yes No
If yes, what is the focus on audit (safety, technical, quality)?
Quality system as a whole.

Do you think that RO quality system (ISO 9000 or IACS QSCS) is sufficient?
Yes.
13. Does your administration rate RO based on their performance?
 Yes No
If yes, can you describe the method?.....
14. Is there any relationship between RO bad performance and stricter monitoring by administration?
 Yes No
-

15. Does your administration assign specific unit to monitor RO?
 Yes No
 If yes, is there special skill needed for the personnel? All members have to be experienced auditors.
16. Please fill in the space below if you have any general comment regarding the RO monitoring system, its difficulty or challenge?

Appendix 3. Returned questionnaire from country Z

Position

DEPUTY DIRECTOR

1. Does your country adopt open registry system?
 Yes No
2. How many Recognized Organizations RO act on your behalf?
TWO
3. Does your administration delegate all statutory surveys to RO?
 Yes No, still retain a number of surveys namely...
 Government surveyor doesn't do any statutory survey even passenger ship. But they do tonnage calculation and issue the International tonnage cert.
4. Does your administration leave all delegated surveys to RO surveyors?
 Yes No, a few surveys have to be accompanied by flag state surveyors, namely....
5. Does your administration follow IMO Res A.739 (18)³² as guidelines?
 Yes No
6. Does your administration assign some personnel to conduct random inspection in ensuring sufficiency of RO work?
 Yes No
 If yes, how often? 10times a year.....
 If yes, how much is the budget allocation for random inspection? Not seperately.
7. Has your administration ever warned any RO for inadequacy of work?
 Yes No
8. Has your administration ever suspended the delegation to any RO?
 Yes No
 If yes, in what case?.....

9. Does your administration have any RO monitoring system as prescribed by IMO Res A.739 (18)?

Yes **No**

If yes, can you describe the system? **RO supervising and administrating part**.....

RO should report to the Government all the statutory survey results.

And government officer regularly and randomly audit their work which was delegated by government. This audit includes offices and ships.

10. Do you think that it is emergence to have a common accepted monitoring system for administration?

Yes **No**

If yes, should IMO provide guidelines on it?.....**yes**.....

11. What does your administration do to related RO concerning the ship detention by PSC? **Analysing the RO survey report and have the government psc check the the ship detened.**

12. Has your administration ever conducted audit on RO?

Yes **No**

If yes, what is the focus on audit (safety, technical, quality)?

ALL PART ON THE ABOVE.....

Do you think that RO quality system (ISO 9000 or IACS QSCS) is sufficient?

..YES.....

.....

13. Does your administration rate RO based on their performance (good, medium, bad)?

Yes **No**

If yes, can you describe the method?.....

14. Is there any relationship between RO bad performance and stricter monitoring by administration?

Yes **No**

15. Does your administration assign specific unit to monitor RO?

Yes **No**

If yes, is there special skill needed for the personnel?

16. Please fill in the space below to make a general comment regarding the RO monitoring system, its difficulty or challenge

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