

## Education and Training as an Approach for Harmonization of PSC Regimes

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### ABSTRACT

Port State Control (PSC) as control of foreign flag vessels in the national ports, has been defined as the last safety net. When shipowners, classification societies, insurers, flag State administrators have in one way or the other failed to do their job, Port State Control comes into the scene. In an ideal world, Port State Control would not exist but unfortunately, due to inescapable realities, Port State Control must remain a standard feature in the maritime safety field. With a view to eradicating substandard ships the Assembly of the International Maritime Organization adopted resolution, to promote the establishment of such regimes in the various regions of the world following the pattern adopted by the European region through the Paris Memorandum of Understanding on Port State Control (MOU) in 1982. Realizing the need to assist in enhancing safety and the protection of the marine environment in other regions, IMO was involved in the promotion of similar eight Port State Control regimes. As the PSC regimes covering the World are almost completed in year 2000 within the participation of 112 countries, Co-operation and harmonization between regional PSC regimes in various regions of the world should be considered as the next target to be achieved.

Based on the fact that the most important factor affecting the improvement and standards of PSC regimes is the human resources factor, it will be most important to investigate and propose a model training course for Port State Control Officers (PSCO's). This course should support the international and national needs and facilitate harmonized and effective implementation of such proposed course. This paper discusses the methodology dealing with the common aspects of PSC and stresses on the importance of PSCO's education and training as an approach for harmonization of PSC regimes.

### Nomenclature

AASTMT	Arab Academy for Science, Technology and Maritime Transport
FSI	Flag State Implementation
PSC	Port State Control
IMO	International Maritime Organization
MoU	Memorandum of Understanding
USCG	United States Coast Guard
PSCO's	Port State Control Officers
EC	European Commission
DNV	Det Norske Veritas

### 1. Introduction

The responsibility of enforcing ships to comply with the provisions of the international relevant instruments rests upon the owners and masters of ships, whereas the responsibility of ensuring that ships comply with the provisions of the international relevant instruments rests upon the Marine Inspection Administration of the Flag State. However, due to the inability of some of the Marine Inspection Administration of the Flag State to fulfill its commitments toward foreign ships at the international level, and subsequently some ships are sailing in an unsafe condition, affecting the lives as well as the marine environment. Hence, the need for setting a new system to get over this problem is becoming more pressing than ever.

#### 1.1 Flag State Implementation (FSI)

Flag State implementation is the national system of inspecting the national flag ships according to the national rules implementing the international conventions.

### **1.2 Port State Control (PSC)**

Port State Control is a regional system of inspecting foreign ships according to the regional systems of implementing international conventions. Port State Control system aims at developing a *harmonized system* of inspecting ships at the regional level with a view to ensuring ships' compliance with the international safety standards and requirements in an attempt to eliminate sub-standard ships from the world fleet of ships.

### **1.3 Regional Agreements and Memoranda of Understanding**

The International Maritime Organization (IMO) has issued numerous rules and international conventions to harmonize the system of inspecting ships. Nevertheless, the Organization's most significant achievement within this context was initiating the process of concluding regional cooperation agreements to exercise Port State Control. Considering that inspecting all the ships calling at the ports of a State is rather difficult and costly, concluding regional Port State Agreements is an effective way of ensuring that each of the States Parties to such agreements would inspect a certain percentage of the said ships, which would reduce costs and ensure that all ships calling at the ports of the region are inspected in accordance with a harmonized system and procedure of inspection to eliminate sub-standard ships.

All the States Parties to the said agreements are represented in the Regional Agreements/MoU Committee in charge of Port State Control. All aspects and activities of the Agreement/MoU are the responsibility of that Committee in which the most important issues are:

- Amending and issuing legislations relevant to the region, whether the said legislations are related to the control procedures and/or preventing sub-standard ships from entering the ports of the region, and
- Approving and providing training courses and seminars needed in the region for PSCO's.

The States Parties to such regional agreements shall abide by the requirements of the said committee.

### **1.4 The Powers of Regional Memoranda of Understanding**

Regional memoranda of understanding have tremendous powers over their ports, under which they determine those countries the rate of detentions of the ships of which exceeds the general average and include them in the targeted flag ships' list (known as the black list). The ships of black listed countries shall be subjected to a concentrated inspection, under which the ship, her equipment, documents and manning are inspected in detail. If the rate of detention of a certain ship is high, or in case of failure to perform major repairs, the ship shall be prevented from entering all the ports of the region (banned).

### **1.5 Global Future PSC Trends**

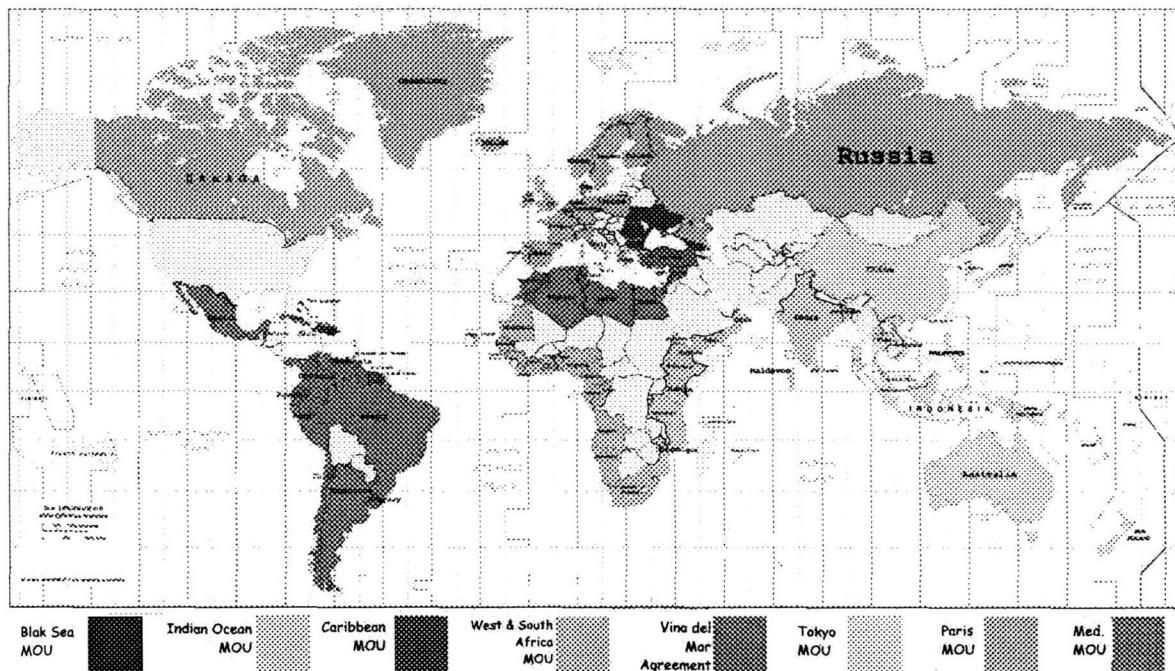
- Paris Memorandum of Understanding, 1982  
Under the prevailing global trend toward harmonizing the standards governing work in the global maritime field, and due to the variance of technological development, efficiency, and manning standards of the ships of the world merchant marine fleet, European countries started to develop criteria and standards for the world merchant marine fleet through Paris Memorandum of Understanding which was signed by European countries in 1982 (18 European countries in addition to Canada).
- United States Coast Guard (USCG)  
The United States of America is one of the pioneering countries with respect to Port State Control. It delegated the job to the Coast Guard which became responsible for performing Port State Control tasks in addition to other tasks. The United States Coast Guard issues monthly and annual reports about the ships which were detained and prevented from entering US ports, in addition to the Black List of the countries operating sub-standard ships.

The International Maritime Organization adopted the ship inspection criteria and standards of Paris Memorandum of Understanding. Within this context, the International Maritime Organization, the International Labour Organization, and the European Commission worked jointly to have the following regional Port State Control memoranda of understanding concluded in coordination with the countries of the world:

- Latin America Memorandum of Understanding, November 1992  
10 countries representing the countries of Central and South America.
- Tokyo Memorandum of Understanding (for Asian countries), December 1993  
16 countries representing the countries of the Far East.
- Caribbean Memorandum of Understanding, February 1996  
9 countries representing the countries and isles of the Caribbean Area.
- Mediterranean Memorandum of Understanding, July 1997  
9 countries from south and east Mediterranean countries.

- West and Central Africa Memorandum of Understanding, 1998  
All countries of West and South Africa.
- Indian Ocean Memorandum of Understanding, 1999  
18 Asian and African countries.
- Arabian Gulf Memorandum of Understanding (under preparation)  
The countries of the Arabian Gulf.

When the last MoU is concluded, the world will have been covered by nine regional memoranda of understanding, in addition to the United States Coast Guard. The process of harmonizing the standards of the concluded memoranda of understanding at the international level will then start with a view to establishing a global structure under which no sub-standard merchant marine fleet can operate at both the regional and international levels. This trend was initiated during a workshop held in the International Maritime Organization in June, 2000, in London, for the Secretariats and the Directors of the Information Centres of the concluded memoranda of understanding for the purpose of reviewing coordination methods and harmonizing work and ship inspection systems. It was decided that this workshop shall be periodically held every two years.



## 2. Education and Training

Considering that it is universally acknowledged that Port State Control Officers (PSCOs) constitute the cornerstone of Port State Control System, and that Maritime Authorities would never be able to effectively contribute to PSC inspection unless PSCOs are well-trained, the International Maritime Organization has developed its IMO Model Course to this effect. The European Commission also contracted with Det Norske Veritas (DNV) for developing an advanced CD ROM course to be used in training ship inspectors of the Paris Memorandum of Understanding. Other educational institutions, such as the Arab Academy for Science, Technology and Maritime Transport, are developing advanced training courses to be conducted in the Mediterranean Area.

### 2.1 The Importance of Harmonizing Educational and Training Curricula

Due to the variance of expertise of the concluded memoranda of understanding, some of which started operating about twenty years ago (Developed MoU), while others had been operating for two years (Developing), it was expected that the level of expertise would be reflected on the standards of the national flag ships of countries Parties to developed memoranda of understanding, such as Paris MoU, or Tokyo MoU. However, analysis of the annual reports issued by the Regional memoranda of understanding indicates that the countries Parties to the developed memoranda of understanding were included in the Black List, which highlights the importance of harmonizing maritime educational and training curricula and programmes for marine inspectors at the

international level and for all memoranda of understanding.

### 3. Analysis of current situation

Analysis of the annual reports concerning the ships which will be targeted under Tokyo and Paris memoranda of understanding, as well as US Coast Guard, gives the same indicator.

#### 3.1 Tokyo MoU Report for the Year 2000

17 countries were included in the Black List. They have been classified on the basis of the MoUs they belong to as follows:

**Analysis of Tokyo MoU Report (1998-2000)**

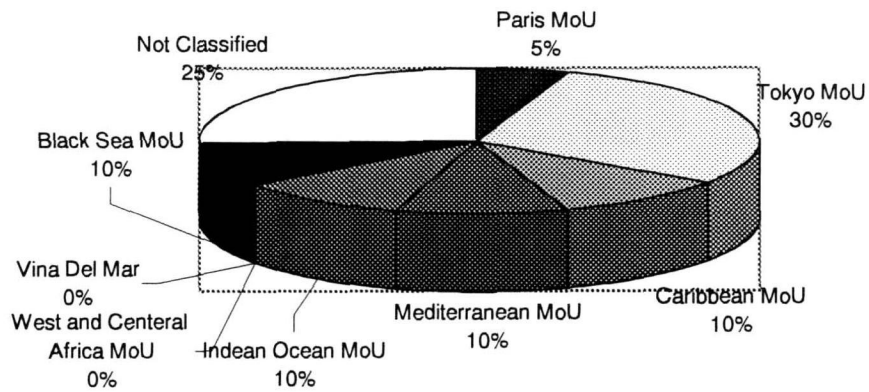
1.	Korea, Democratic People's Republic				
2.	Cambodia				
3.	Belize				
4.	Indonesia				
5.	Viet Nam				
6.	Turkey				
7.	Saint Vincent and the Grenadines				
8.	Honduras				
9.	Russian Federation				
10.	Malaysia				
11.	Thailand				
12.	Malta				
13.	Korea, Republic of				
14.	Taiwan, China				
15.	India				
16.	Cayman Islands				
17.	Iran				

Memorandum/Agreement	C	F
Paris MoU	1	0.9
Tokyo MoU	6	5
Caribbean MoU	2	1.7
Mediterranean MoU	2	1.7
Indian Ocean MoU	2	1.7
West & Central Africa MoU	0	0
Vina Del Mar	0	0
Black Sea MoU	2	1.7
Not Classified	5	4.3
	20	17

C = No. of countries  
 F = Country Factor = C/total(C)\* total(No.)  
 Ex. Paris MoU (F) = 1/20\*17 = 0.9

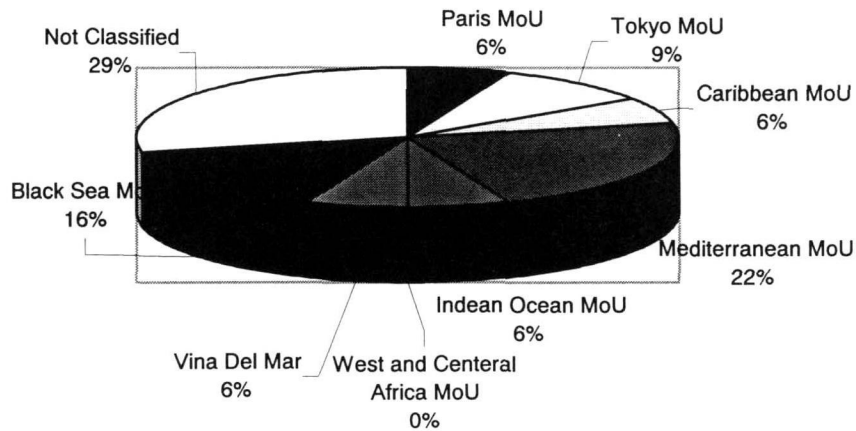


#### 3.2 Paris MoU Report (97-99)

29 countries were included in the Black List. They have been classified on the basis of the MoUs they belong to:

1.	Albania			
2.	Honduras			
3.	Belize			
4.	Lebanon	■		
5.	Syrian Arab Republic			
6.	Romania	■		
7.	Cambodia	■		
8.	Turkey	■		
9.	Georgia	■		
10.	Algeria	■		
11.	Libyan Arab J.	■		
12.	Saint Vincent and the Grenadines	■		
13.	Egypt	■		
14.	Morocco	■		
15.	Mauritius	■		
16.	Bangladesh	■		
17.	Ukraine	■		
18.	Malta	■		
19.	Pakistan	■		
20.	Cyprus	■		
21.	Panama	■		
22.	Malaysia	■		
23.	Cuba	■		
24.	Russian Federation	■	■	
25.	Bulgaria	■		
26.	Thailand	■		
27.	Latvia	■		
28.	Croatia	■		
29.	Azerbaijan	■		

Memorandum/Agreement	C	F
Paris MoU	2	1.8
Tokyo MoU	3	2.7
Caribbean MoU	2	1.8
Mediterranean MoU	7	6.4
Indian Ocean MoU	2	1.8
West and Central Africa MoU	0	0
Vina Del Mar	2	1.8
Black Sea MoU	5	4.5
Not Classified	9	8.2
	32	29



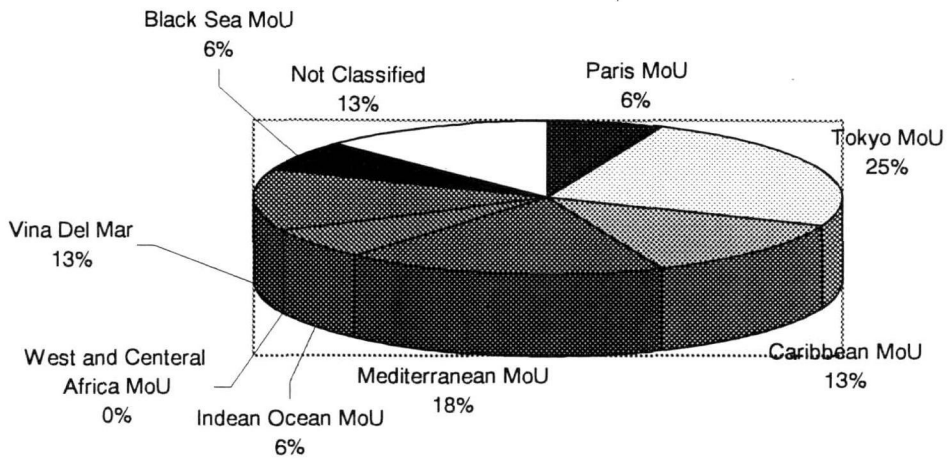
### 3.3 US Coast Guard Report (97-99)

14 countries were included in the Black List. They have been classified on the basis of the MoUs as follows:

1.	Antigua & Barbuda			
2.	Belize			
3.	Cyprus	■		
4.	Honduras			
5.	India	■		
6.	Malta	■		
7.	Panama	■		
8.	Philippines	■		
9.	Russian Federation		■	
10.	Saint Vincent and the Grenadines			
11.	Thailand			
12.	Turkey	■		
13.	Vanuatu	■		
14.	Venezuela	■		

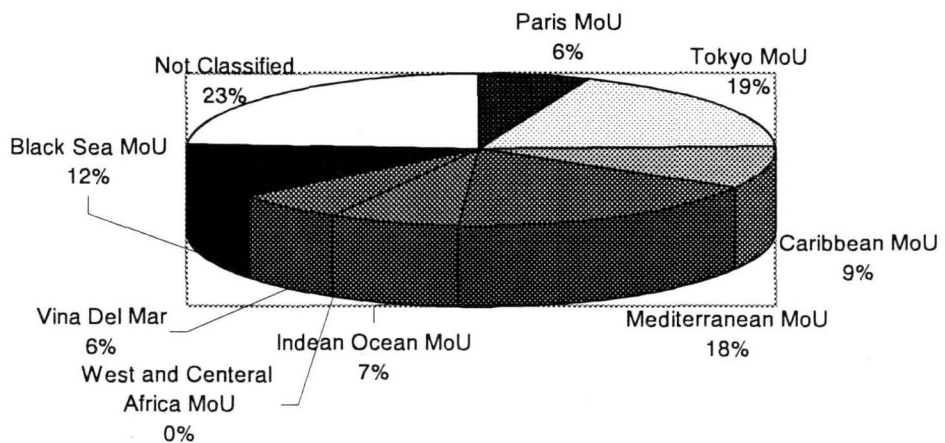
Memorandum/Agreement	C	F
Paris MoU	1	0.9
Tokyo MoU	4	3.4
Caribbean MoU	2	1.8
Mediterranean MoU	3	2.5
Indian Ocean MoU	1	0.9
West and Central Africa MoU	0	0
Vina Del Mar	2	1.8
Black Sea MoU	1	0.9
Not Classified	2	1.8
	16	14





The summary of the analysis of the annual reports of the memoranda of understanding could be presented in the following table.

	<i>Tokyo</i>	<i>Paris</i>	<i>USCG</i>	<i>Total</i>	<i>%</i>
<i>Paris MoU</i>	0.9	1.8	0.9	3.6	6.0
Tokyo MoU	5	2.7	3.4	11.1	18.5
Caribbean MoU	1.7	1.8	1.8	5.3	8.8
Mediterranean MoU	1.7	6.4	2.5	10.6	17.7
Indian Ocean MoU	1.7	1.8	0.9	4.4	7.3
West and Central Africa MoU	0	0	0	0	0
Vina Del Mar	0	1.8	1.8	3.6	6.0
Black Sea MoU	1.7	4.5	0.9	7.1	11.8
Not Classified	4.3	8.2	1.8	14.3	23.9
	17	29	14	60	100



The above figure indicates that the names of different memoranda of understanding have been included in the Black List with slight percentage differences, which points out to some factors, one of them and most important is the harmonization of the standards of education and training of Port State Control officers. Also, the performance of any memorandum of understanding is related to the performance of all the other memoranda of understanding.

#### **4. Educational and Training Programmes**

In view of the current situation of different methods and levels of training and education in the area of Port State Control, it is recommended to classify courses into the following categories:

##### **4.1 PSC Course (Level I – One Week)**

The importance of Sea/Shore based personnel knowledge in regard of PSC work and practices was recorded in many cases. Accordingly, a one week course is recommended for general knowledge for Sea/Shore based personnel. Outline of PSC Course – level I, may contain the following items:

- .1 Introduction:  
(FS and PSC regimes and Instruments, Non-Convention ships and ships below Convention size).
- .2 International Conventions  
(STCW & ISM Code, GC & IGC Code, BC & IBC Code, BCH Code, IMDG Code, Load Line & Load Line Remarks, Tonnage Measurements, MARPOL, SOLAS, COLREG, ILO No. 147)
- .3 Ship Classification and Surveys
- .4 Agreements and MoU's
- .5 Guide Lines for FS & PSC  
(Life saving Appliances, Ship documents and Crew qualifications, Navigation and Communication equipments, Fire fighting Equipment, Hull and Safety in general, Machinery and electric installations, Cargo Safety, Pollution, Crew Accommodation)

##### **4.2 PSC Course (Level II – Two Weeks)**

This course can be designed for new PSCO's based on IMO Model Course. (Theoretical material given in Level I in one week and Practical Aspects in One week)

##### **4.3 PSC Course (Level III – Four Weeks)**

This course can be designed for advanced Training for PSCO's based on the EC model course developed by DNV using CDROM and other related materials, (Theoretical material given in Level III in Two weeks and Practical Aspects in Two weeks). Outline of PSC Course – level III, may contain the following items:

- .1 Introduction  
(Background, team building, qualifications of ship inspectors, training needs and plan)
- .2 Formal Aspects  
(International instruments – Global and regional – Co-operation, IMO and ILO, Flag State and Port State regimes, Conventions on Maritime Safety and Pollution prevention, Ship Classification, interaction between Administration and Classification Societies, Non Convention ships).
- .3 Technical Aspects  
(General ship knowledge, Stability and Load line, Dangerous Cargoes and pollution aspects, Electrical installations, Hull Constructions, Fire Safety, Lifesaving – Appliances, Communication and Navigation Equipment).
- .4 Operational Aspects  
(Safety Management Systems, Operational Control of drills – firefighting – lifesaving – bridge/cargo operations, Manning).

Although there are educational and training programmes as already stated, it is imperative that training programmes should be adapted to the actual practice of inspectors and not mainly achieving the theoretical part of the International conventions. On the other hand, the problem of harmonizing the procedures of PSCO's work has to be overcome. For example, varied memoranda of understanding issue what is termed "PSCOs manual" containing the procedures which inspectors should perform before, during, and after the inspection. At the same time, the International Maritime Organization issued Circ.787 containing similar information. Therefore, the procedures should be harmonized by observing the Organization's publications which should preferably be included in the training programme for inspectors.

### **Conclusions and Recommendations**

Considering that the success of Port State Control mainly depends on education and training, and considering that Port State Control is a regional system, which means that the standards of education and training vary from one area/region to another, which adversely affects the inspection standards in each region, and due to the need to harmonize and improve the standards of inspection under varied memoranda of understanding, it is extremely necessary that educational and training programmes for inspectors should be harmonized, with particular emphasis on the importance of harmonizing the actual performance of inspectors by using a unified procedures manual and a unified international code of symbols. The items of the standard educational and training programme should be determined up to the required standards, in addition to utilizing modern technologies in conducting these programmes.

The training and Education for PSCO's is not only the type of training needed in this area but also the training and education for Sea/Shore based Personnel.

### **References**

Paris MoU, Web Site  
Tokyo MoU, Web Site  
US Coast Guard, Web Site  
Mediterranean MoU, Web Site  
IMO Model Course (PSC)  
IMO Conventions and Circulars  
EC Model Course (PSC – advanced training)  
AASTMT Courses (PSC – different levels)