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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**OVERSIGHT OF RECOGNIZED
ORGANIZATIONS:**

Understanding Flag States Practices

By

SANOGO CHOILIO

Côte d'Ivoire

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

MASTER OF SCIENCE

in

MARITIME AFFAIRS


(MARITIME SAFETY AND ENVIRONMENTAL ADMINISTRATION)

2022

Declaration

I certify that all the material in this dissertation that is not my 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 personal views, and are not necessarily endorsed by the University.

Signature: 

Date: 20th September 2022

Supervised by: Professor Chong-Ju CHAE

Supervisor's affiliation: MSEA

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Abstract

Title of Dissertation: **Oversight of Recognized Organizations: Understanding Flag States Practices.**

Degree: **Master of Science**

Delegation of statutory tasks by flag States' maritime administrations to Recognized Organizations (ROs) has become a common practice in the shipping industry. Accordingly, the capacity of these flag States administrations to oversee their Recognized Organizations for ensuring that they fulfil the delegated tasks is critical to provide safety in shipping.

This study seeks to understand how flag States perform their oversight duties. It analyses flag States' practices to provide good and/or best practices that can be shared among flag States.

It briefly examines the history of delegation to and oversight of ROs. Then, it provides international conventions and theoretical background that frame the relations of power between flag States and their ROs.

Through in-depth interviews and document analysis, this dissertation uses the instrumental case study of USCG practices to highlight significant changes that occurred in the ROs' oversight framework since the El Faro accident in 2015. This case study provides ground for subsequent quantitative analysis to detect good and/or best practices to monitor ROs activities.

The study found that oversight activities should be a systematic and adequately-resourced programme set up around a dedicated personnel or coordination office that supports highly qualified flag State personnel and maintains effective communication with its ROs. Based on the findings, the study proposes an analogy between a ship and ROs' oversight practices through a graphic representation of the guiding principles for oversight programme best practices.

KEYWORDS: Recognized Organizations, Oversight, Flag States' Obligations, Flag States' Practices, Good Practices, Recognized Organizations Code, Recognized Organizations oversight by the USCG.

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List of Abbreviations

RO: Recognized Organization

IMO: International Maritime Organization

MoU: Memorandum of Understanding

U.S.: United States

USCG: United States Coast Guard

NASEM: National Academies of Sciences, Engineering, and Medicine

LDC: Least Developed Countries

SIDS: Small Island Developing States

UNCLOS

GISIS: Global Integrated Shipping Information System

IACS: International Association of Classification Societies

SOLAS: International Convention for the Safety of Life at Sea

TONNAGE: International Convention on Tonnage Measurement of Ships

MARPOL: International Convention for the Prevention of Pollution from Ships

LLC: International Convention on Load Lines

AFS: International Convention on the Control of Harmful Anti-fouling Systems on Ships

MLC: Maritime Labour Convention

RO Code: Code for Recognized Organizations

WMU: World Maritime University

U.S.A: United States of America

TSMS: Towing Safety Management System

MSP: Maritime Security Program

ACP: Alternative Compliance Programme

CFR: United States Code of Federal Regulations

ISO: International Organization for Standardization

NTSB: National Transportation Safety Board

CVC-4: Flag State Control Division

MSC: Marine Safety Center

OCMI: Officer in charge of Marine Inspections
TPOC: Third Party Organization Coordinator
VCA: Vertical Contract Audit
INT 1, 2, 3, 4, 5, and 6: Interviewee 1, 2, 3, 4, 5, and 6
MISLE: Marine Information for Safety and Law Enforcement
ISM Code: International Safety Management Code
ACB: Accredited Certification Body
DOC: Document of Compliance
COC: Certificate of Compliance
ISSC: International Ship Security Certificate
SMC: Safety Management Certificate
MMS: Mission Management System
IMSAS: IMO Member State Audit Scheme
KPI: Key Performance Indicators
COVID-19: Corona Virus Disease 2019
MOC: Memorandum of Cooperation
EMSA: European Maritime Safety Agency
IQARB: International Quality Assessment Review Body
EU: European Union

Chapter 1 Introduction

1.1. Background and Context

A Recognized Organization (RO) is an organization assessed, found compliant with the RO Code, and authorized by a flag State to execute, on its behalf, statutory certification and services according to the flag State's international and national obligations (International Maritime Organization [IMO], 2013; IMO, 2011). Delegation of statutory tasks by flag States' maritime administrations to ROs has become a common practice in the shipping industry (Mansell, 2009). Accordingly, the capacity of these flag States administrations to oversee their ROs for ensuring that they fulfil the delegated tasks is critical to provide safety in shipping.

However, the analysis of the IMO consolidated audit summary reports from 2016 to 2019 shows that items related to the oversight of ROs represent the majority of the shortcomings in the area of delegation of authority by flag States to their ROs (IMO, 2021). Causing more than 40% of the findings or observations¹ related to the area of delegation of authority (IMO, 2021), the oversight of ROs may be considered the Achilles' heel in the relation between flag States and their ROs. This need to effectively evaluate and oversee ROs is shared by maritime administrations particularly those with limited resources (Mansell, 2009).

The review of available academic works shows that several studies have been done on the liability and responsibility of ROs and classifications societies but few address power relations between ROs and flag States (De Bruyne, 2019; De Bruyne & Vanleenhove, 2016; Jacobsson, 2014).

¹ In the IMO Consolidated Audit Summary Report, there are seven sub-area under the area of "delegation of authority." The findings and observations related to the sub-areas dealing with flag states' oversight responsibilities represented more than 40% of the shortcoming under the area of "delegation of authority."
([https://wwwcdn.imo.org/localresources/en/OurWork/MSAS/Documents/MSAS/Analysis/III%207-INF.27%20-%20Analysis%20of%20four%20consolidated%20audit%20summary%20reports%20under%20the%20IMO%20Member%20State%20Audit%20Schem...%20\(Secretariat\).pdf](https://wwwcdn.imo.org/localresources/en/OurWork/MSAS/Documents/MSAS/Analysis/III%207-INF.27%20-%20Analysis%20of%20four%20consolidated%20audit%20summary%20reports%20under%20the%20IMO%20Member%20State%20Audit%20Schem...%20(Secretariat).pdf))

For example, Basedow & Wurmnest (2006) explored the third-party liability of the German classification societies. Through a comparative study of some selected traditional maritime countries such as the United States and France, they examined the claims that third parties can initiate legal complaints against the German classification society based on countries' private laws. The same issue of third-party liability has also been studied by Karaman (2011) by comparing Turkish, Swiss, German and American laws.

Using the database of the Memorandum of Understanding (MoU) of Tokyo and the MoU of Paris, together with data supplied by the International Association of Classification Societies, Silos et al. (2013) revealed the need for better oversight of ROs to reduce substandard ships. Xiao and al. (2020) supported the same idea that monitoring indicators such as ships' age, history, and RO is essential to identifying and eliminating substandard ships. However, academic research addressing the issue of flag States' practices to evaluate and oversee ROs is missing.

Regarding RO's link with flag States, the RO code sets the framework to help flag States in the assessment and authorization of classification societies before delegating some of their functions to ROs (IMO, 2013a). Despite this framework, statistics of MoU agreements such as the Paris MoU shows that the RO-related detentions rate remains an issue for the performance of flag states (Paris MoU, 2020). Hence, the question of oversight to ensure the performance of ROs is paramount not only for flag States but also for regional and international bodies like IMO in charge of regulating shipping activities.

1.2. Problem Statement and Justification of the Research

In 1983, the U.S.-flagged (United States of America-flagged) cargo ship Marine Electric sank off the coast of Virginia causing the death of 31 crewmembers. The investigation report underlined failures of the United States Coast Guard (USCG) oversight programme of ROs. In the recommendations about the ROs oversight, the accident investigation team proposed to stop the delegation of statutory functions to

private entities and allow only USCG inspectors to verify compliance of U.S.-flagged commercial vessels with the safety standards. However, the USCG refused to end its third-party delegation programmes but decided to enhance the oversight programme (National Academies of Sciences, Engineering, and Medicine [NASEM], 2021; USCG, 1985).

In 2015, another U.S.-flagged cargo ship, the El Faro, sailing from Florida to Puerto Rico sank during a hurricane off the coast of the Bahama Islands. Even though the main reason for the accident was linked to unsafe actions and decisions made by the ship's master and owner before and during the voyage, the investigation board highlighted also failures in the RO oversight programme as significant contributing factors. Despite the reforms implemented three decades earlier, the investigation concluded of resemblance between the concerns raised in the two accidents (NASEM, 2021; National Transportation Safety Board [NTSB], (2017); USCG, 2017)

The El Faro accident causing the death of 33 crewmembers, including 28 Americans transformed the question of ROs oversight into a national hot topic. Consequently, the United States Congress enacted a public law, the Save Our Seas Act of 2018, which incorporated the section Hamm Alert Maritime Safety Act of 2018 to address the issue of ROs oversight. The new law ordered several changes to the organization and training of the USCG personnel as well as the evaluation and oversight of ROs (Save Our Seas Act, 2018).

This situation reveals that the issue of RO oversight is not just a challenge for Least Developed Countries (LDCs) and Small Island Developing States (SIDS).² Moreover, it poses the question of understanding the current changes and innovations set by the American flag States administration to improve the oversight of its ROs. Most important, it queries what the maritime industry can learn from this instrumental case.

² According to the United Nations there are 46 Least Developed Countries and 38 Small Island Developing States. Their lists are available respectively at the following links: <https://unctad.org/topic/least-developed-countries/list> and <https://www.un.org/ohrlls/content/list-sids>

1.3. Research Aim, Objectives and Questions

This research explores the question of oversight of RO's performance to help countries and international organizations in their role of providing safety in the shipping industry. It aims to propose good or best practices that can be used to oversee ROs in their capacities of fulfilling their responsibilities on behalf of flag states. Further, this research explores how flag states can efficiently use their maritime administration's limited resources to properly supervise the services provided by their ROs.

To achieve the aim and objectives discussed in the previous section, this dissertation will address the following questions:

- How do flag States oversee their ROs?
- What can be shared as good or best practices to oversee ROs activities?

1.4. Structure of the Dissertation

The dissertation consists of six chapters. Chapter 1 "Introduction" provides the background to situate the issue of ROs oversight in the wider context of flag States obligations. Then, it uses historical cases to pose the problem of flag States' practices in providing appropriate oversight of their ROs. After posing the problem which justifies the research, this chapter clarifies the aim and objectives to achieve and states the questions guiding the research.

Chapter 2 "Literature review" focuses on the theoretical and historical background necessary to understand and discuss the issue of oversight of ROs by flag State administrations. It introduces the concept of flag States by discussing the rights and duties of flag States before highlighting the limitations and alternatives to the current concept.

Chapter 3 "Methodology and methods" displays the detailed process used by the researcher to answer the research questions and achieve the aim presented in chapter 1. This gives the reasons why the researcher used a qualitative methodology built on a case study approach and a quantitative survey. It also describes the data collection and

analysis process. Moreover, it presents the selection criteria of the participants and considers the question of transparency, reliability, biases and ethics related to the research.

Chapter 4 “Findings” highlights the main results of the researcher's investigations. Based on the conceptual framework provided in part 3 of the RO code³, the chapter organizes and reports the key findings by considering the following aspects of ROs oversight: flag States’ organizational structure, flag States personnel requirements, and planning, implementation, evaluation, and improvement of oversight programmes.

Chapter 5 “Discussion” synthesizes and provides interpretations of the main findings presented in the previous chapter. It also evaluates patterns as well as ambiguities in light of the research questions and the conceptual framework guiding the research. Additionally, it presents the limitations that need to be considered when assessing the final results of this research.

Chapter 6 “Conclusions” summarizes the result of the research and deduce applicable knowledge through recommendations.

³ Part 3 of the RO code is one of the main IMO instruments that lays down the guiding principles of ROs oversight by flag State administrations. More details are provided in the section 2.4.1.

Chapter 2: Literature review

2.1. Concept of flag State in International Shipping

Since the times of the ancient Greeks, cities, armies and states have used flags as a symbol of identity and ownership. Also, the development of the state-nations concept after the Peace of Westphalia enabled the emergence of more structured international law based on the notion of sovereignty. Since that period, the notion of sovereignty has remained at the centre of international law and relations among states (Mukherjee & Browning, 2013). Consequently, flags became also signs of sovereignty highlighting States' rights and duties as codified in the Montevideo Convention on the Rights and Duties of States (1933). For ships, flags became an external manifestation of their nationality entitling them to benefits from the military, diplomatic and legal protection as well as economic privileges given by the flag State. According to, international maritime law a state gives its flag to a ship through the registration process and a ship can sail under the flag of only one state (United Nations Convention of the Law of the Sea [UNCLOS], 1982).

Mansell (2009) highlights that the classic concept of Statehood is not always applicable to international shipping and maritime law. First, even though flag States and States claim sovereignty, they do not have the same status with regard to international law. Not all flag States satisfy the definition of a State as accepted in international laws per the criteria of population, territory, government and capacity to engage with other States. For example, Dependent Territory Registries that are not nation-States and cannot enter into a treaty with other States can become flag States by establishing their registry. Second, the flag State's prescriptive and enforcement jurisdiction are more reduced than that of a State. States prescriptive and enforcement jurisdiction is extended to five principles: national, territorial, protective, universal, and passive personality principles. In contrast, flag States' criminal jurisdiction and enforcement powers are limited to two principles: nationality and territoriality.

For Mukherjee & Browning (2013), the notion of ship nationality is critical to overcoming challenges posed by the functional characteristic of mobility of ships operating beyond the jurisdictional limits of a state. They explained that as a self-contained unit providing a place for social and professional interactions, ships need a legal regime at any time to frame these interactions. Therefore, flag States' laws establish the legal framework under which ships can operate to prevent any legal void, particularly on the high seas. A ship without nationality is considered a criminal ship which cannot benefit from the protection of any flag State (Klein, 2011). Consequently, ships cannot trade internationally if a flag State does not grant her its nationality (Watt & Coles, 2009).

2.1.1. Rights and Duties of Flag States

The fundamental right of flag States is their privilege to fix conditions under which they grant their nationality to a ship. This is done through the administrative process of registration. The classical law case stating the right for a state to unilaterally determine the prerequisite for granting its nationality to a ship is the *Muscat Dhows Case* (1905). In this case, opposing France and Great Britain, the Permanent Court of Arbitration in The Hague, Netherlands, stated: "Generally speaking it belongs to every Sovereign to decide to whom he will accord the right to fly his flag and to prescribe the rules governing such grants." This principle will later be codified in international law through Article 91 of the UNCLOS. Even though article 91 of UNCLOS requires the existence of a "genuine link between the State and the ship," practice shows that the notion of a genuine link remains elusive (Xhelilaj et al 2017; Yu et al., 2018).

The lack of uniformity in the interpretation of the notion of "genuine link" explains the diversification of the registration system into closed registries and open registries such as secondary, international and hybrid registries. These variations are based on the level of control over registered ships. For example, a closed registry which is the traditional mode of registration in the shipping industry will require a close operational, technical, economic or social connection between ships and flag States. To be specific a closed registry may have registration criteria such as ships manned by

flag States citizens, ships built in flag States shipyards, or ships owned by flag State's natural-born citizens and companies established under the flag States laws. To escape these restrictions, shipowners from traditional maritime countries flagged out to registries less stringent and more functionally and economically attractive. This reality favoured the shift from the traditional view of the registration process as an assertion of flag State sovereignty over its ship to a view of ship registration as a service-oriented activity with more competition (Mukherjee & Brownrigg, 2013).

Regardless of the system of registration adopted, all flag States have obligations to fulfil the same duties according to international law. Flag States' primary duties are stated in the UNCLOS also described as the "constitution of the sea" (Barnes & Barrett, 2016). Article 94 of this convention states four areas of responsibility for flag States. First, paragraph 1 of this article requires each state to "effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag." In paragraph 2, a flag State needs to maintain a registry of ships flying its flag and exercise jurisdiction over these ships, their masters, officers and crews. Paragraph 3 and 4 provides that each flag State shall take action and set out specific details for ships in its registry to ensure safety at sea. Paragraph 7 obliges a flag State to conduct investigations when ships flying its flag are involved in a marine casualty. All these duties shall be conducted according to "generally accepted international regulations." In other words, flag States have the primary responsibility to implement and enforce maritime international regulations for ensuring compliance of their vessels with international standards.

2.1.2. Limitations of Flag State Concept and Proposed Alternatives

Despite sovereign rights on its ships, a flag State may not take enforcement actions against its ship in another State's waters because those actions could encroach on another's sovereignty. This limitation derives from the principle of territoriality. The territoriality principle provides that states have legislative and enforcement jurisdiction over activities occurring in their territories. Therefore, a flag State may share jurisdiction with coastal and port States when ships flying its flag is operating

within another state's waters. Under these circumstances, ships are subject to concurrent jurisdictions (Honniball, 2016; Jancuo & Pengfei, 2021; McDorman, 1997).

Also, the ambiguity around the notion of “genuine link” leading to a diversification of registry systems has increased the issue of effective control and oversight of ships by flag States. This situation was highlighted with the surge of the flag of convenience phenomenon after 1920 due to the Prohibition⁴ in the United States (Carlisle, 1981; Currie, 1963; Özçayir, 2001). Even if the practice of flag-in and flag-out for specific reasons is as old as the shipping industry, it has reached a significant proportion in the last century sparking the issue of the flag of convenience which has changed the structure of shipping worldwide. The transformation of ship registration into a more service-oriented activity allowed non-traditional maritime countries—with less control and enforcement power over their fleets—to become major flag States. The lack of effective control from major flag States to ensure compliance with international standards led to numerous accidents impacting maritime safety and environment (Hamad, 2016).

Because of the limitation of the flag states concept and its impact on maritime safety and environment, several scholars questioned the relevance of the flag state system in the shipping industry. For example, Kovats (2006) and Behnam (2003) explained that ships should be designated as subjects of international law and would operate directly under regulations done by the international community. Consequently, ships will no more be subject to legislative involvement of flag States but under the control and enforcement power of international organizations.

However, Karim (2010) explained that for practical reasons this “revolutionary approach” could be difficult to implement. He rather supported the solutions proposed by Molenaar (2007) of enhancing and tightening the power control of port States as

⁴ The Prohibition Era began in 1920 with the vote of the 18th Amendment to the U.S. Constitution banning the manufacture, transportation and sale of intoxicating liquors. Because of this measure many American flagged vessels flag out to the Panamanian registry.

well as the solution of Mooradian (2002) of broadening the prescriptive and enforcement jurisdiction of coastal States to the Economic Exclusive Zone.

One of the solutions adopted by the International Maritime Organization (IMO) was to enhance flag States' control and enforcement capabilities by allowing them to delegate some of their statutory tasks to Recognized Organizations (ROs) (Silos et al., 2013). As stated by Mansell (2009), the majority of IMO member states request the service of ROs for controlling their fleet. Therefore, the issue for flag States is how to develop an effective oversight program to ensure that ROs are fulfilling the delegated tasks as required.

2.2. ROs in the Flag State Concept

2.2.1. From Classification Societies to ROs

Classification societies evolved out of the need for shipowners to show evidence of the suitability of their ships for shipping activity to insurers and charterers. The first society was Lloyd's. It was named after the London coffee house where people involved in the shipping (merchants, marine underwriters) used to gather from the seventeenth century. From a meeting point, it became a new place to get information because the owner began printing a news sheet called Lloyds News with information on parliament proceedings, foreign war news, executions, and marine news. But the business had a new orientation after his death in 1713. The same year, his relatives founded Lloyd's List which focused on shipping news through a network of correspondents around the world (Lloyd's Agent). They created a Register Society in 1760 and a register of ships was published in 1764 to inform merchants and underwriters about the conditions of ships. The ratings given by Classification Societies became a significant tool for underwriters. In 1834, it merges with the shipowner's register to become the Lloyd's Register of British and Foreign Shipping. This new registry published rules for the survey and classification of ships leading to the birth of Classification societies (Lloyd's List Intelligence, 2022; Lloyd's Register, 2022, Mansell, 2009).

For independence purposes, the earliest clients of the Classification society were underwriters doing payments by subscribing to registers. However, this model changed when Lloyd's Register initiated charges for surveys and purchasing of Register Books to shipowners. The survey was a process of evaluating the condition of ships and giving them a "rate" symbolizing the seaworthiness of the ship. It was an evaluation of risk to judge the constructional quality and the maintenance state of the hull and the rigging and determine navigational categories— a safe area of operation at the sea for the ship. However, shipowners' desire for more than just surveys of construction and occasional ratings was answered by the creation of a classification certificate to prove the ongoing standard of the vessel through a system of regular surveys (Boisson, 1994). This was the creation of the "Class rules" system which later became significant in the regulatory framework for design and construction purposes.

Meanwhile, national laws evolved to allow flag states for carrying out statutory surveys to check the condition of the ship and its equipment for navigational and safety purposes. Class rules surveys of hull and machinery were gradually adopted by flag states as proof of compliance with standards by ships to avoid duplications of surveys. Also, flag States increasingly delegated their statutory powers to classification societies that had more personnel with the required expertise to execute the complex activity of ship surveys. For example, in 1890, the British administration delegated the authority to assign freeboards to Lloyds and Bureau Veritas. That delegation of authority may be considered as the earlier hours of Classification societies acting as ROs (Mansell, 2009). According to the IMO Global Integrated Shipping Information System (GISIS) database (2022), there are 104 ROs.

2.2.2. Private and Public Functions of Classification Societies/ROs

A RO is an organization that has been assessed by a flag State, found compliant with the RO code, and authorized by this flag State to perform statutory certification and services as per IMO mandatory instruments and the flag State's national legislation (IMO, 2013a; IMO, 2011).

According to Mansell (2009), these ROs can be categorized into two groups. The eleven members⁵ of the International Association of Classification Societies (IACS) with long-standing expertise, uniform standards and procedure, consultative status at the IMO, and more than 90% of the world cargo tonnage may be classified as “Conventional” ROs. Other ROs, sharing the tonnage not covered by IACS members, could be considered “Convenient ROs.” From this classification, it appears that most of the RO’s works are done by entities that are classification societies, particularly IACS members. Therefore, it raises a conflict of interest between the private function done as classification societies and the public service fulfilled as ROs (Jessen, 2014).

The conflict of interest is because the same entity, with his hat of classification society, is employed by shipowners to provide surveys and certificates of seaworthiness and good condition of a ship for mainly insurance purposes. These are called “class” surveys and certificates. Meanwhile, as a RO, the same entity is employed by flag States to survey, inspect, and ensure that the same ship is complying with flag State standards by delivering “statutory” surveys and certificates. Classification Societies/RO are paid by shipowners for consultative services. On the other hand, they are tasked by flag States but also paid by the shipowner to deliver public services (Hosanee, 2008). This conflict of interest highlights the necessity to understand the power relationship between flag States’ administration and ROs, particularly the need for an oversight programme to ensure that the latter is fulfilling the tasks as delegated by the former.

2.3. Theoretical Background on Oversight Power Relationship among Organizations: the Principal-Agent Theory

The principal-agent theory originates from the disciplines of economics and institutional study field with the revolutionary approach of the Nobel laureate Ronald Coase. He introduced the notion of “social cost” in the 1960s to explore how property

⁵ Because of the sanctions imposed on Russia following the Russian-Ukrainian conflict in February 2022, the IACS Council withdrew the Russian Maritime Register of Shipping’s (RMRS) membership of IACS on March 11, 2022 (<https://rs-class.org/en/news/general/international-association-of-classification-societies-has-taken-an-illegitimate-decision-to-withdraw/>).

rights and transaction costs affect business and society. His studies considered the relation and power balance between parties engaged in a bargaining process outside of litigation processes (Noble prize organization, 2022; Brewer et al. 2010). As noted by Bernhold & Wiesweg (2021), the primary aim of the principal-agent theory is to devise a contractual relationship between principals and agents as flawless as possible. For this reason, the principal-agent theory is considered one of the dominant approaches to studying the relation of power—delegation and oversight—between principal and agent in several domains such as international relations (Schillemans & Bjurstrøm 2020; Pollack, 2006).

In the principal-agent theory, the principal represents someone, an organization or an institution who delegates power. The agent represents someone, an organization or an institution to whom the authority is delegated. Therefore, the principal is the one who oversees the agent for ensuring that the power delegated is adequately used and tasks delegated are properly fulfilled. Principal aims at ensuring that the agent's action adheres to the principal's goals because the responsibilities remain with the principal (Moloi & Marwala, 2020; Lupia, 2001; Moe, 1984).

Brewer et al. (2010) highlighted that the convergence of principals' objectives and agents' decisions may be jeopardized by four major factors. The first one is what he called the "adverse selection" problem. This occurs when principals do not have a good knowledge of the agents' values and abilities. As a consequence, principals can delegate to an agent who is not the best choice for achieving the principal's objective. Second, the "diverse objective programme" problem happens when agents' objectives are at the expense of the principals' objectives. This situation requires expensive monitoring and controlling of the agents. Third, the unequal distribution of information between agents and principals results in the "information asymmetry" problem. The final problem is the "weak incentives problem" where principals lack enough decision power and capacity to ensure the commitment of the agent to the principals' values and expectations.

Several researchers criticized the principal-agent theory for failing to predict the conditions and reasons under which principals delegate and oversee agents; however, most have not brought forward flexible frameworks and alternatives (Cuevas-Rodríguez et al., 2012; Hendry, 2005; Lan & Heracleous, 2010; Lubatkin et al., 2007). Also, new approaches such as the stewardship-agency theory (Majone, 2001; Davis et al., 2018) should not be seen as opposed to principal-agent theory, but rather as the same approach evolving on a double continuum. The first continuum represents how much an agent is committed to its principal objectives. This continuum moves from an agent with more focus on its self-interest to an agent or trustee with more focus on the principal interest. The second continuum considers how much a principal entrusts its agent. This continuum moves from a principal who delegates more power with less oversight role to a principal who retains more power with more oversight functions (Pollack, 2006). Consequently, the principal-agent theory is considered an empirically valid theory to provide insightful analysis of delegation and oversight systems when dealing with a problem involving cooperative structure (Eisenhardt, 1989).

2.4. Flag State and ROs as Principal-Agent

2.4.1. International Legal Framework

Under relevant IMO's and International Labor Organization's mandatory instruments, flag States are required to control their ships to ensure compliance with international regulations. For example, regulation I/6 of the 1974 International Convention for the Safety of Life at Sea (SOLAS), article 7 of the 1969 International Convention on Tonnage Measurement of Ships (TONNAGE), Annex I regulation 6, Annex II regulation 8, Annex IV regulation 4, and Annex VI regulation 5 of the 1973/1978 International Convention for the Prevention of Pollution from Ships (MARPOL), article 13 of the 1966/1988 International Convention on Load Lines (LLC), Annex 4 regulation 1 of the 2001 International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS) and regulation 5 of the 2006 International Maritime Labour Convention require that officers of flag state administrations inspect and survey their ships as part of the flag States responsibilities for ensuring safety,

environmental protection and adequate working conditions. However, flag states may delegate some of these tasks to surveyors nominated for the purpose or to Recognized Organizations. Despite that delegation, flag States still retain full responsibility under the existing conventions (IMO, 2019a). Accordingly, flag States are principals delegating tasks to ROs acting as their agents. As same as in the principal-agent theory, flag States assume the oversight role of ROs because they remain responsible for the actions of the ROs acting on their behalf.

To assist flag States in the delegation process and to ensure consistent global implementation of international requirements, IMO adopted the Code for Recognized Organizations (RO Code) in 2013 by resolutions MEPC.237(65) and MSC.349(92), to replace resolutions A.739(18) on Guidelines for the authorization of organizations acting on behalf of the Administration and resolution A.789(19) on specifications of the survey and certification functions of RO acting on behalf of the Administration. The RO Code establishes minimum criteria against which organizations are assessed, recognized and authorized to carry out delegated tasks. Also, it defines guidelines for the oversight of these organizations by flag States. This code is divided into 3 parts.

The first part addresses the general provisions of the Code by defining the purpose, the scope, the principle of delegation and oversight, and the content of the Code. One specific feature of the oversight principle is that flag States should cooperate to make sure that their common ROs are discharging their delegated tasks under the Code.

Part 2 of the Code is related to the recognition and authorization requirements. This part identifies the mandatory prerequisites that an organization shall satisfy to be recognized by a flag State as an RO. Additionally, it presents the mandatory requirements with regard to independence, impartiality, integrity, competence, responsibility and quality management policy. These requirements need to be fulfilled by any RO performing statutory certification and services on behalf of its authorizing flag States. Also, part 2 of the Code provides the mandatory requirements that flag States shall follow when assessing, recognizing, authorizing and delegating statutory tasks to an RO.

Part 3 deals with the oversight of ROs by the delegating flag States. In this part, there is guidance to develop and implement an oversight programme for ROs performing statutory certification and services on behalf of a flag State.

To sum up, the RO code provides mandatory minimum criteria for the selection and delegation of tasks to ROs. However, it only suggests non-mandatory guidelines to flag States for fulfilling their oversight role over the ROs. Consequently, it raises the question of flag States' practices in their oversight role of delegated ROs.

2.4.2. Duties of Flag States to oversee RO

The legal obligation for a flag State to oversee its ROs derives from that flag State's ultimate responsibility to ensure that ships flying its flag are complying with the State's international and national obligations as stated in article 94 of UNCLOS. This oversight responsibility is also restated in IMO conventions and codes such as SOLAS, MARPOL, MLC, Load Line Conventions, and IMO Instruments Implementation Code. For example, SOLAS regulation I/6 mentioned, "In every case, the administration shall fully guarantee the completeness and efficiency of the inspection and survey, and shall undertake the necessary arrangements to satisfy this obligation." Consequently, each flag State administration must retain the resources and capability to verify and monitor the work of the RO as well as conduct its own flag State inspections of vessels flying its flag when necessary (Mansell, 2009).

According to the RO Code (2013), oversight is any supervision activity implemented by a flag State to confirm that ROs actions satisfy the IMO and national requirements of the delegating State. In other words, oversight allows a flag State to ensure the convergence of its objectives and the action taken by its ROs. It assures the flag State that its national and international responsibilities are properly fulfilled and its reputation safeguarded.

Part 3 of the RO code lays down a proposal framework that addresses the establishment, management, monitoring, revision and improvement of an oversight programme. This framework considers the objectives, extent, responsibilities,

resources, procedures, implementation, records of an oversight programme as well as the evaluation of RO's performance by flag States. The code also defines keywords related to oversight activities and elaborates on the principles of audits to facilitate a common interpretation of the oversight framework. For example, it allows flag States to rely on audits performed by accredited certification bodies. Beyond the framework, it encourages intergovernmental cooperation among flag States that have authorizations with the same ROs for conducting joint or combined monitoring activities.

Even though the oversight of ROs remains a significant issue for the shipping industry, as highlighted by the IMO consolidated audit summary reports from 2016 to 2019⁶, few academic peer-reviewed articles address that issue.

For example, N'Hoboutoun (2018) used the study case of the Togolese flag to analyse the effect of the delegation of authority on the performance of the country's fleet. He concludes that the inadequate oversight of the ROs, particularly the non-ICAS member was one of the main reasons for the poor performance of the Togolese fleet.

Also, Park (2012) analysed IMO's consolidated audits summary and deduced that there is a need to improve the oversight of the ROs by flag States. Hence, he proposed an oversight scheme on a performance basis for better targeting of poor-performing ROs.

In 2017, Olsen studied how the power relation between a flag State and its ROs can affect safety onboard ships. He categorized these relationships into three groups: compliance-based approach, rational data-driven approach, and dialogue-based approach. After analysis, he recommended a mix of three approaches as the best solution to improve safety in the shipping industry.

However, the question of how flag States practically oversee their ROs for fulfilling their obligations remains unexplored. Exploring the ways and means developed by

⁶ See section 1.1 for more details.

flag States to oversee the performance of their ROs will enable the identification of good practices for improving safety in the shipping industry. The next chapter will present the methodology and methods undertaken by the researcher to answer the questions of flag States' practices and identify good and best practices.

Chapter 3: Methodology and methods

3.1. Methodology

This research adopts a qualitative research methodology. Qualitative research is characterized by a naturalistic, and interpretative approach to exploring phenomena from the interior by taking the perspective and description of the research participant as a starting point (Aspers & Corte, 2019; Flick,2009). This methodological approach suits this topic which aims to provide a deep understanding of flag States’ practices in the oversight of their ROs. Achieving that aim cannot have a better starting point than considering the perspective of the person involved daily in the implementation process of flag States’ oversight programs.

Also, as highlighted by Ritchie et al. (2104), qualitative research methodology is suitable when the research purpose is to answer questions “what, how and why” rather than “how many”. Moreover, the complexity of the topic and the potential nuances among flag States’ understanding of their responsibilities support the choice of this methodological approach which provides flexibility in the research process for an in-depth exploration and understanding of the issues involved. Therefore, choosing a qualitative research methodology provides a range of theoretical frameworks with an adequate selection of methods, instruments, and procedures for the researcher to investigate, analyse and answer the research questions. (Denzin & Lincoln, 2011).

3.2. Research design

The research is designed into two main steps consisting of an instrumental case study providing ground for a subsequent quantitative approach to respond to the research questions. The choice of the case study approach answers the challenges posed by the scope and time limit of a Master of Science program. The scope and time limit of this research could not allow an in-depth investigation of all the flag States with ROs oversight responsibilities. According to the online IMO’s database, there are 146 flag States administrations which delegate their statutory tasks to ROs (see Appendix A).

This means that there are 146 potential administrations to be studied. Hence, the researcher adopts the instrumental case study approach allowing the choice of a specific country to answer the first research question about explaining flag States' practices to oversee the performance of their ROs. The conceptual framework provided in part 3 of the RO code guided the exploration of that case study.

Also, the instrumental case study approach is appropriate to address the research question because it is designed to play a supportive role in understanding complex issues. An instrumental case study allows the researcher to focus more on the issue at stake than on the case itself (Stake, 1995). This approach is convenient for the research because the issue of the oversight of ROs is beyond a single country case, as explained in section 1.2. Consequently, the adoption of this approach will enable the researcher to remain focused on the RO oversight issue.

However, the choice of case study method comes with the inherent challenges of that qualitative research approach, namely how to overcome the problem of case selection with the danger of selection bias and how to find criteria for generalization beyond the immediate case (Benett, 2004).

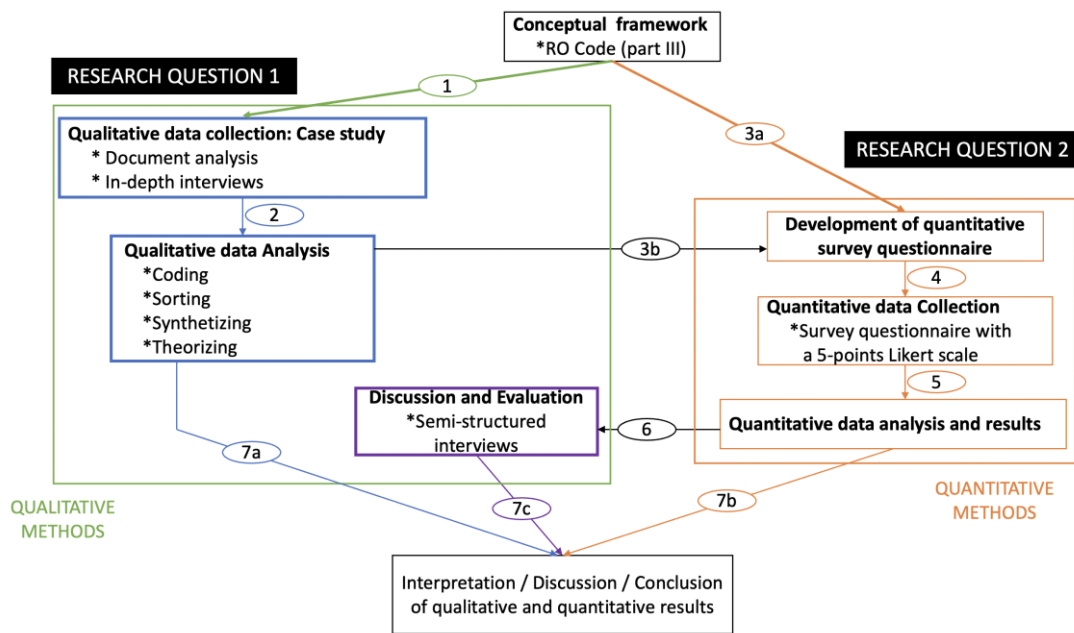
To overcome the first challenge, the researcher adopts a purposive non-probability sampling method. This sampling method is the most suited for answering the first research question because it mitigates the risk of selection bias and provides the opportunity for an in-depth investigation of specific topics (Etikan, 2016). Details on the choice of the case study will be further discussed in the following section.

Also, the researcher's choice of a quantitative approach to supplement the case study aims at addressing the second challenge of generalization beyond the chosen case. Benett (2004) recommends a multi-method approach between case study and quantitative method to make the best possible use of their complementarity. Hence, the exploration of the case study provides adequate insight for identifying critical dimensions that enables the development of a quantitative questionnaire to address the second research question.

The statistical analysis of the answers to the questionnaire will provide results which will be discussed and assessed by subject matter experts in order to provide conclusions and recommendations. The research design is illustrated in Figure 1.

Figure 1. *Research Design.*

Source: Author.



Note: A Mixed-method Approach consisting of a Case Study with a Quantitative Survey. Numbers represent the sequential progress of the research.

3.3. The American Flag State Case Study

The researcher chose the United States of America (U.S.A) as an instrumental case study because it presents unique features that will provide significant insight into the issue of ROs' oversight by flag States administrations. First, the U.S.A recorded accidents where the failure in the oversight of ROs was directly highlighted as a significant contributing factor to the accident. For example, in 1983, the U.S.-flagged cargo ship Marine Electric sank off the coast of Virginia causing the death of 33 crewmembers. The investigation report highlighted failures of the USCG oversight programme of ROs. Concerning the inspection of U.S.-flagged commercial vessels, the accident investigation team recommended stopping the delegation of statutory

functions to private entities and allowing only USCG inspectors to verify compliance of these ships with the safety standards. The USCG refused to end their third-party delegation programmes but decided to enhance the oversight of its third parties. In 2015, another U.S.-flagged cargo ship, the El Faro, sank off the coast of the Bahamas Island during a hurricane. Despite the reforms implemented three decades earlier, the investigation of the El Faro also pinpointed failures in the RO oversight programme and conclude of similitude between the concerns raised in the two accidents (NASEM, 2021; USCG, 1985; USCG, 2017).

Second, the casualties of the El Faro accident, 33 crewmembers including 28 Americans, brought the issue of ROs oversight to the forefront of the American national debate. To illustrate, in the aftermath of the accident, the United States Congress passed into public law the Hamm Alert Maritime Safety Act of 2018. This law addressed the issue of ROs oversight specifically. It ordered several changes in the USCG oversight organization and training as well as the USCG practices to evaluate and oversee ROs performance (Save Our Seas Act, 2018).

Third, choosing the American example gives the possibility to investigate several types of oversight programmes because the USCG is maintaining different types of delegation and oversight regimes within its fleet. For example, the Streamlined Inspection Programme (SIP) designed for unmanned barges involved in domestic navigation, the Towing Safety Management System designed for towing vessels (TSMS), the profiled programme for vessels enrolled in the Maritime Security Program (MSP), and the Alternative Compliance Programme (ACP) for ocean-going cargo ships involved in foreign trade (National Academies of Sciences, Engineering, and medicine, 2021). Hence, the American case provides the opportunity to look at the issue of ROs oversight from different perspectives.

This dissertation does not seek to appraise the effectiveness of the RO's oversight programme developed by the United States because such a task will require classified data that is beyond the reach of the researcher. The USCG case rather serves as a

practical example providing insight to facilitate the understanding of the flag State practices.

3.4. Research Methods

The design of the research suggests a pragmatic mixed method approach not only to allow an appropriate gathering of the data needed to answer the research questions but also to provide different perspectives on the issue of ROs oversight by flag States administrations (see steps 1 and 3a of Figure 1). For the first research question, a document analysis of national regulations and in-depth interviews were conducted to investigate the case study and provide necessary data for a better understanding of the flag States' practices (see step 2 of Figure 1).

The document analysis focused on the United States laws, regulations, circulars, reports, procedures, forms, and job aids related to delegation to and oversight of their ROs (see Appendix B for the list of documents). Qualitative content analysis is a systematic method allowing to reduce the amount of data and focusing on those relevant to the research question (Rosengren, 1981). The qualitative analysis of the regulatory documents constituted an essential source of information about how the flag State maritime administration understands, organizes and fulfils its oversight role of ROs. The initial knowledge provided by the qualitative content analysis of relevant documents provided a discussion basis for subsequent in-depth interviews.

In-depth interviews are qualitative data gathering methods involving individual interviews with a reduced number of persons, generally subject matter experts, to explore their perspectives and experience on a particular topic. This method is also appropriate to provide context and detail about other data collected (Boyce & Neale, 2006). Thus, this method was suitable to learn about how oversight regulations are implemented. Moreover, the researcher was able to get an insight into the challenges encountered during the implementation phase. In addition to enabling a deep understanding of the issue at stake, the document analysis and in-depth interviews

conducted to answer the first question lay the ground to develop a quantitative survey for the second question (see step 3b of Figure 1).

The second research question was addressed through a quantitative method. The researcher carried out a quantitative survey to collect the views of participants on what are the best practices to develop and implement successful oversight programmes of ROs by flag States administrations. The researcher formulated the questions of this survey based on not only the conceptual framework of part 3 of the RO code but also the findings from the case study conducted to answer the first research question (see steps 3a and 3b of Figure 1). The questionnaire consisted of closed and open-ended questions. For the close-ended questions, the researcher used a Likert scale, with the grading system “not important” for 1 point, “slightly important” for 2 points, “moderately important” for 3 points, “very important” for 4 points, and “extremely important” for 5 points, served as quantification method to provide a numerical value to the choice of participants (see steps 4 and 5 of Figure 1). The statistical analysis of this quantitative survey questionnaire provided ground for generalization of the final result of the study deriving from the study case (Benett, 2004).

To discuss and assess the result of the analysis from the survey, the researcher conducted semi-structured interviews with subject experts matters (see step 6 of Figure 1). Semi-structured interviews allowed the researcher to guide the discussion and remain focused on core topics. At the same time, it gave freedom to discuss emerging and relevant topics through follow-up questions (Harvey-Jordan & Long, 2001). Consequently, this method offers the researcher the possibility to assess the statistical results for their practical interpretation.

To conclude, the researcher considered the main findings from the case study, the survey results and the semi-structured interviews with experts for interpretation, discussion, and synthesis purposes (see steps 7a, 7b, and 7c of Figure 1).

3.5. Data Collection, Processing and Analysis

National regulation and in-depth interviews constituted the main source of data for the qualitative content analysis to answer the first research question. Relevant national rules framing the oversight programme of flag States' maritime administrations were retrieved from the internet and received from the person interviewed. The researcher used the framework provided in part 3 of the RO code to generate the necessary code for the analysis of these documents and the interview transcripts. The codes generated were: “organization and structure”, “personnel and training”, “planning and implementation”, and “evaluation and improvement”. However, the researcher remained open to new codes that could emerge from the direct analysis of the document at hand. The coding was done with the Qualitative Data Analysis Software ATLAS.ti⁷ (see Appendix C). ATLAS.ti is a Computer Assisted Qualitative Data Analysis Software (CAQDAS) suited for studying connectedness among several documents (Barry, 1998). Also, Paulus & Lester (2016) noted that despite some limitations such as lack of real-time collaboration and online interactional data, ATLAS.ti allowed a transparent, rigorous, reflexive, and systematic analysis of qualitative data. Hence, it helps the researcher to work with a large amount of data and support deep analysis of information gathered.

Recording software on phones or laptops was used to collect data from the face-to-face and online interviews conducted during the research. Most of the online interviews were conducted through video meeting software such as Zoom⁸ and Microsoft Teams.⁹ Interviews were done in French and English. French interviews were translated into English by the researcher for harmonization during the coding process. The researcher also took notes during the interviews. This facilitated the organization of the data and the generation of follow-up questions, particularly during the in-depth interviews. Moreover, taking notes helped maintain a record of unspoken

⁷ Details on the software are available at the link [https:// atlasti.com/](https://atlasti.com/)

⁸ Details on the software are available at the link: <https://zoom.us/>

⁹ Details on the software are available at the link: <https://www.microsoft.com/en/microsoft-teams/group-chat-software>

details enabling better analysis of collected data. Transcription and coding of the records were manually done by the researcher. Even though it was time-consuming, the choice of manual transcription provided further insight that fostered the analysis process.

The quantitative survey was conceived and distributed via the internet using the online survey software QuestionPro.¹⁰ The World Maritime University (WMU) offered free access to its students to benefit from this paid online software. QuestionPro permitted the creation and distribution of questionnaires as well as collecting and synthesizing data through graphs and tables. In addition to the statistical analysis available with QuestionPro, the researcher extracted the survey data and used the Statistical Package for the Social Sciences SPSS¹¹ for deeper analysis. This analytical tool has already been used for research in the maritime industry (Bailey et al., 2006; Christodoulou et al., 2019; Thai, 2008).

The researcher designed the survey to collect two sets of quantitative data. The first set¹² illustrated the significance of defined items related to oversight activities. The analysis of the USCG instrumental case study and the analysis of the RO code part 3 framework provided the relevant items to generate the survey questions (see steps 3b and 3a of Figure 1). These items are related to the organizational structure and personnel of flag States' administration, the planning, implementation, evaluation and improvement of ROs' oversight programmes. The sum of the grading, according to the Likert scale defined in section 3.5, gave an evaluation of how important responders valued each of the proposed items. The second set¹³ of quantitative data considered the same items, but the objective was to choose the three most important. By comparing these two sets of data, the researcher was able to get insight into the

¹⁰Details on the software are available at the link: <https://www.questionpro.com/>

¹¹Details on the software are available at the link: https://www.ibm.com/se-en/analytics/spss-statistics-software?mhsrc=ibmsearch_a&mhq=spss.

¹²The first set of data is made of answers to questions 1.1; 2.1 to 2.7; 3.1 to 3.5; 4.1 to 4.7; 5.1 to 5.4; 6.1 to 6.6; and 7.1 to 7.3 of the survey questionnaires (appendix F)

¹³The second set of data is made of answers to question questions 2.8; 3.6; 4.8; 5.5; and 6.7 of the survey questionnaires (appendix F).

preference of the responders about good and/or best practices related to ROs oversight programmes.

3.6. Pilot test

The researcher conducted pilot tests before applying his final research instruments. For example, after developing the initial question guide for in-depth and semi-structured interviews, the researcher sent the pilot questionnaire to six students and alumni of the World Maritime University from different countries. Three of them had in-depth knowledge of the topic because of their background in Maritime Administration or ROs personnel. The other three had no expertise in the topic before their study at the World Maritime University allowing new perspectives to address the question of RO oversight. The comments from these different perspectives were used to amend and enrich the final question guides. The same process was conducted to develop the final questionnaire for the quantitative survey.

3.7. Selection of Participants

The technicality of the topic required participants with thorough experience in the issue under study to provide useful, excellent, and reliable data (Morse, 2010). To select participants with the potential required to discuss the topic, the researcher employed the purposive-convenience sampling method. Consequently, the pool of potential participants includes three categories of people with a background as practitioners— Maritime Administrations, ROs and consultancy agency personnel. The researcher conducted six interviews consisting of 3 in-depth interviews and 3 semi-structured interviews respectively with INT 1, INT 2, INT 3, INT 4, INT 5, and INT 6 (see Appendix D, E, and F).

The researcher got the contact of the interviewees from fellow students, professors at the WMU, and lecturers met during his class field trips. Getting access to these resourceful personnel was sometimes a slow and difficult process because of their busy schedule. However, they were all comfortable and enthusiastic to discuss the subject and share their experience.

For the participant in the survey, in addition to the network used for contacting the interviewees, the researcher also shared the link to the survey questionnaire on the WMU alumni online platform to reach a maximum of people. The targeted personnel were people from the maritime sector (Maritime Administration, ROs, and consultancy agencies) with expertise related to the oversight of ROs. 97 participants responded to the survey questionnaire (see Appendix G and H for the details on the survey and the participants in the survey).

3.8. Transparency, Reliability, and Biases

Transparency in the research process is essential for building credibility and trustworthiness (Bloomberg & Volpe, 2008). To demonstrate transparency, the researcher systematically documented and described thoroughly all actions undertaken during the research—development of the data collection instrument, selection of participants, data collection, processing and analysis of the data.

Also, the researcher constantly triangulated the data by considering multiple sources to enhance trustworthiness (Yin, 2014). For example, to mitigate the influence of participant bias, the researcher not only looked for diverse perspectives and backgrounds but also compared and contrasted the information received from the interviewees with available literature. When data were not concordant the researcher undertook further investigation or request more clarification from the interviewees. Findings were critically assessed and all possible explanations were considered before conclusions. By fostering trustworthiness, credibility, and transparency, the researcher maintained a chain of evidence to improve the research's internal reliability (Yin, 2014)

Furthermore, the researcher applied a timestamp test to validate the questionnaires that he received. He did not validate survey questionnaires that were completed in less than 5mn because the average completion time during the pilot test was 14 minutes 29 seconds with a minimum completion time of 10 minutes 47 seconds. Therefore, the researcher considered that a responder could not read and answer properly the

questions in less than 5 minutes. After application of that filter, 7 questions to the surveys were found invalid.

In addition to the time test, the researcher also considered answers provided by responders. For example, some questions were linked to detect responders who randomly answered the questions. This test allowed the removal of 6 questionnaires. Finally, 84 answers to the surveys were judged valid for the study.

Qualitative studies are influenced by researchers' biases, backgrounds and beliefs (Merriam, 2002). Concerning the researcher's background, it should be mentioned that the researcher has no previous experience with RO-related issues. Hence, he has not built strong biases before undertaking this research. However, the researcher acknowledged that his preferred ontological and epistemological approach informed and influenced how he collected and interpreted data. In other words, the natural way of thinking of the researcher affected his choice during the research process. Thus, to keep these inherent biases under control, the researcher maintained a research diary to facilitate reflexivity throughout the research process (Nadin, 2006).

3.9. Research Ethics

Ethical considerations were critical for the researcher. All instruments used during this research were approved by the WMU Research Ethics Committee before proceeding with the data collection.

The researcher gave particular attention to ensuring the well-being of the participants throughout the data collection process. Participants received information explaining the objectives of the research and the details of how their data will be processed. Each participant gave his informed consent. Also, participants were informed of the possibility to revoke their participation at any time without any conditions.

Moreover, several measures were taken to protect the identity of the participants. Data were stored on a hard drive protected by a password and processed with confidentiality.

Chapter 4: Findings

This chapter will present the main findings from the qualitative and quantitative methods undertaken by the researcher. First, it presents the main features necessary to understand the USCG oversight framework to monitor ROs. Then, it displays the result of the case study and the survey by considering the following aspects: organizational structure, requirements for flag state personnel in charge of oversight activities, planning and implementation of oversight activities, as well as evaluation and improvement of ROs oversight by flag States administration.

4.1. Introduction to the USCG oversight framework of ROs

As explained by the interviewees, the lead governmental agency in charge of implementing and enforcing most of the IMO's instruments in the U.S.A is the Coast Guard. This agency is under the Department of Homeland Security. Confusion should not be made with the U.S. Maritime Administration (MARAD) which is an agency under the Department of Transportation. The U.S MARAD mission is to technically support the maritime transportation infrastructure of the U.S.A and promote the use of waterborne transportation by providing a seamless integration of maritime infrastructure with other transportation systems. Its objective is to ensure the viability of the U.S. merchant marine (U.S Department of Transportation Maritime Administration, 2022). However, according to section 2 of the USCG Act (1946), the USCG's primary responsibilities are to ensure the safety of life at sea, and to enforce or assist in the enforcement of all applicable federal laws, on, under, and over the high seas and waters subject to the jurisdiction of the U.S.A. Consequently, the administration in charge of the oversight of ROs is the USCG.

American regulations, particularly subpart 2.45 of title 46 of the U.S. Code of Federal Regulations (CFR), define a RO as an organization authorized by the USCG to carry out statutory certifications and services on behalf of the U.S.A (Shipping Act, 2012). Part 8 of title 46 of the CFR provides more details about the criteria requested to be accepted as a RO in the U.S.A. Among the criteria, it is required that the RO:

- Has functioned as a classification society for at least 30 years and developed its own class rules;
- Has adequate geographical coverage and resources to carry out all delegated functions;
- Has a total classed tonnage of at least 10 million gross tons;
- Has a minimum of 150 exclusive surveyors;
- Has a permanent corporate office in the United States;
- Maintains an internal quality system not less than the International Organization for Standardization (ISO) 9000 series certification;
- Maintains and ensures compliance with a Code of Ethics recognizing inherent responsibilities associated with delegation of authority;
- Provide a U.S. supplement¹⁴ to the class rules.

This definition incorporates the RO's definition provided in the IMO instruments, particularly the RO code. As an example, it is stated in subpart 2.45 of title 46 of the U.S. CFR that a classification society seeking approval to become a RO in the U.S.A must comply with the minimum standards as recommended in IMO resolution A.739(18). Authorization to act as an RO in the U.S.A is granted on a reciprocal basis. A classification society whose headquarter is not in the U.S.A can be recognized as a RO only if the country where this classification society has its headquarter accepts the American classification society—American Bureau of Shipping (ABS)—as a RO.

The USCG has authorized 07 ROs to act on its behalf. There are the American Bureau of Shipping (ABS), Bureau Veritas (BV), Nippon Kaiji Kyokai (ClassNK), DNV GL, Indian Register of Shipping (IRS), Lloyd's Register (LR), and RINA. They are all IACS members (see appendix I for the delegation status of each RO). In the Domestic Annual Report on the Flag States Control, the USCG reports data displaying the

¹⁴ A U.S. supplement is a document prepared by the classification society and approved by the USCG. This document addresses areas where USCG requirements are not incorporated in the Classification Society rules or in international convention. A supplement aims to ensure that ROs knows and will apply U.S regulations during its delegated tasks (<https://www.govinfo.gov/content/pkg/FR-1997-12-24/pdf/97-33477.pdf>).

number of vessels and companies inspected by ROs (Table 1). These data show a continuous increase in the service delivered by ROs on behalf of the USCG. Consequently, the USCG needs to adapt its oversight plan to monitor properly the services delivered by the ROs on its behalf.

Table 1. *Statutory Services Delivered by ROs on Behalf of the USCG from 2019-2021.*

Years	Number of vessels in the U.S Fleet subjected to inspection	Number of vessels attended by ROs for statutory surveys	Number of vessels attended by ROs for Safety Management Certificate audits	Number of ship management companies attended by ROs for Documents of Compliance audits
2019	20,064	3,479	856	174
2020	19,398	4,377	965	185
2021	18,967	4,436	1031	185

Note: Numbers extracted from the USCG Flag State Control Annual Report 2019, 2020, and 2021. Even though the first report was published in 2017, it is in 2019 that the data about the number of vessels and companies attended by ROs to deliver statutory services began to be published.

The need to review USCG oversight practices became apparent with the accident of El Faro in 2015. The National Transportation Safety Board (NTSB) and Coast Guard Marine Board of Investigation report revealed several shortcomings in the USCG oversight practices that facilitate the occurrence of this accident. The findings from the investigations which are relevant to the oversight functions of the USCG can be grouped into the following observations: inappropriate organizational structure and lack of clear policies to oversee RO performance, shortcomings in the RO surveyors and Coast Guard marine inspectors’ competencies and qualifications to verify vessels compliance, and inadequate data tools and metrics to facilitate vessel compliance verification. The significance of the El Faro case prompted American lawmakers to adopt the Hamm Alert Maritime Safety Act of 2018 and compelled the USCG to update its RO oversight practices and organizational structure.

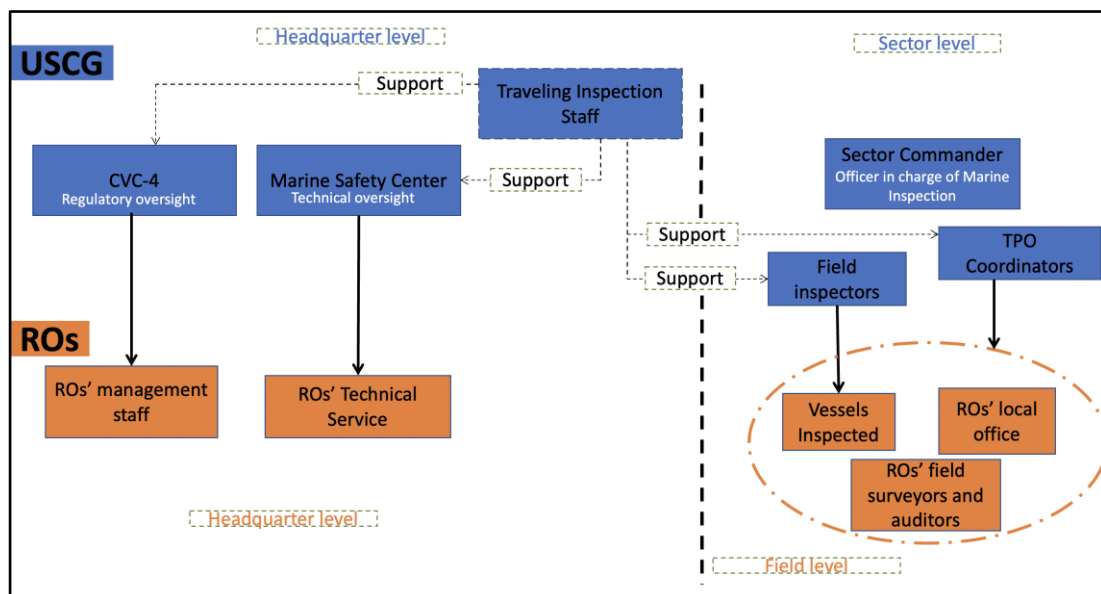
4.2. Organizational Structure

4.2.1. Findings of the Qualitative Method

The structure of the USCG administration for ensuring oversight of ROs is built on the Flag State Control Division (CVC-4), Marine Safety Center (MSC), Traveling Inspection Staff, and Coast Guard Sectors (Figure 2). The CVC-4 was created following the recommendations of the El Faro investigation teams. This division, working under the Office of Commercial Vessel Compliance (CVC), is responsible for overseeing ROs and other third-party organizations acting on behalf of the USCG. His primary responsibility is to issue policies, and procedures to guide USCG marine inspectors in conducting oversight examinations of ROs works. It represents the contact point for ROs' management staff at the USCG headquarters.

Figure 2. Structural Organization of ROs Oversight by the USCG.

Source: Author.



The Marine Safety Center is an independent Headquarter Command in charge of approval and review of plans for the design, construction, repair and alteration of U.S. flag vessels. It provides technical oversight of the classification societies and ROs for

the USCG. It is considered the technical point of contact of the ROs at the USCG headquarters level.

The Traveling Inspection Staff is a group of specialized and highly qualified senior marine inspectors. Working under the Assistant Commandant for Prevention Policy, it provides support to field inspection teams through consultancy on a range of issues such as regulatory compliance. It serves as an on-call, travelling technical resource to assist with vessel operations considered high risk, unique, or of special interest.

At the sector level, the USCG Sector Commander is responsible for all Coast Guard missions within his area of responsibility. He cumulates the functions of Captain of the Port, Federal Maritime Security Coordinator, Search and Rescue Mission Coordinator, maritime Federal On-Scene Coordinator, and Officer in Charge of Marine Inspections (OCMI). As the OCMI, he is entitled to inspection, enforcement, and administrative powers to implement title 46 and title 33 of the U.S. Code about maritime safety, security and environment protection within the U.S. waters. Consequently, he commands the USCG workforce in charge of marine inspections at the field level and represents the highest authority in charge of ROs oversight in his area of responsibility.

At the field level, the oversight of ROs is the responsibility of the Third-Party Organization Coordinator (TPOC). This function was created after the El Faro accident. The TPOC is a subject-matter expert for oversight of third parties such as ROs that fulfil delegated functions on behalf of the USCG. He leads inspection teams during complex inspections and Vertical Contract Audits (VCA)¹⁵ and conducts trend analyses and quality reviews of Marine Information for Safety and Law Enforcement (MISLE) data.¹⁶ The new function of TPOC aims at facilitating the coordination

¹⁵ According to the RO code part 2, a “VCA is a contract/order specific audit of production processes, including witnessing work during attendance at a survey, audit or plan approval in progress and, as applicable, including relevant sub-processes. A VCA is carried out at a location or a site (Survey Station/Approval Office/Site) to verify the correct application of relevant requirements in service realization for the specific work in that contract/order, and their interactions.”

¹⁶ MISLE is a USCG data gathering system that tracks law enforcement, environmental protection, marine security and safety activities of U.S. commercial and recreational vessels, their owners and

between the USCG field inspectors and the headquarter as well as between ROs and USCG by coordinating all USCG oversight activities with the ROs personnel at the field level.

The changes in the American organizational structure after the El Faro accident show that an emphasis is placed on the coordination aspect between ROs and USCG. For example, Coast Guard policies required each Coast Guard unit to have an officer serving as a liaison with each RO. This liaison officer is the main point of contact for the RO surveyors and Coast Guard inspectors within each local region. The El Faro accident investigation reveals that most of the Coast Guard units did not have such a liaison officer. Following the recommendations of the investigation team, the USCG created 19 positions of Third-Party Organization Coordinators to engage and provide support to their safety partners such as ROs (NASEM, 2021). Also, the creation of the Flag State Control Division at the USCG headquarters answers to the need to coordinate oversight activities of ROs at the national level. With the primary task of providing policy, procedures, and guidance to RO, the Flag State Control Division monitors and assesses ROs' activities to maintain a performing American fleet.

Even though interviewees acknowledge that countries might set up different structural organizations to oversee ROs, they agree that a good oversight structural organization should consider both field-level and office-level oversight. The field level oversight relies on the flag States' inspectors and auditors to have a look at the quality of the product which is the vessel with its safety procedures. The office level relies on liaising with ROs management personnel to provide continuous support and facilitate the resolution of problems. As claimed by INT 3,

It seems there could be many ways to organize a maritime administration to optimize its RO oversight role. Some combination of field-level flag state inspectors or surveyors that are able to observe at first-hand the vessels'

shipping companies
(https://www.dhs.gov/sites/default/files/publications/privacy_pia_uscg_misle.pdf).

conditions, along with office personnel that liaise and correspond with the RO personnel, would seem important.

4.2.2. Findings of the Quantitative Method

The mean and mode of “setting a dedicated oversight service within the flag State administration” to oversee ROs are respectively 3.86 and 4 (Table 2). This means that the average grade given by the responders is 3.86 and the most frequent grade appearing in the response is 4. These two values compared to the grading system of the Likert scale defined in section 3.5 showed that most of the responders considered a “dedicated service” to be “very important” for a successful oversight framework.

The second set of data related to the structural organization of flag States administrations confirms that trend. The survey revealed that 71% of the responders think that the structural organization of the flag State administration is critical for effective oversight of the ROs. However, 80% of the ROs personnel who answered think that the structural organization set by the flag States administration is not critical for adequate oversight of the ROs’ activity (Figure 3).

Figure 3. *Significance of the Oversight Organizational Structure.*

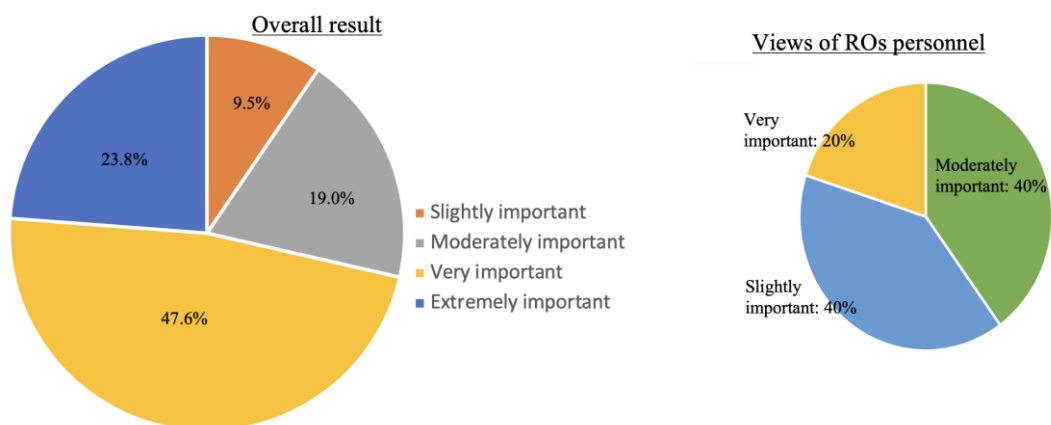


Table 2. *Evaluation of the importance to set up a dedicated oversight service in the Flag State administration*

	N		Mean	Median	Mode
	Valid	Missing			
The structure of the Maritime administration to ensure the oversight of ROs (dedicated service and personnel)	84	0	3.87	4.00	4

4.3. Flag state personnel

4.3.1. Findings of the Qualitative Method

In 2020, the USCG inspection workforce counted 725 marine inspectors. This workforce was made up of 80% of military personnel and 20% of civilians (United States Government Accountability Office, 2022). Military personnel are not required to have a maritime background before applying to the USCG. Also, most civilians are retired USCG personnel who are contracted after their retirement. As explained by INT 1, “*the USCG primary develops their flag state inspectors from within, rather than hiring persons with previous maritime industry experience*”. He concluded that this situation may pose challenges for the USCG personnel to develop an appropriate understanding of the technical and business organization of the ROs because, “*the USCG primarily develops their flag state inspectors from within; thus, it does not typically have personnel previously employed with an RO that can share with their colleagues about the technical and business understanding of the RO*” (INT 2).

However, the USCG provide documented training that all newly appointed flag state inspectors undertake. This programme requires that an inspector earn qualifications based on specific vessel types (barges, tankers, small or large passenger vessels, etc.) before serving as a lead inspector. INT 3 gave the following details about the training and insisted on the significance of ethical training,

Historically, part of this training was made of several resident courses (each 3-5 weeks in length) at the USCG training centre in Yorktown, Virginia, along with “on-the-job” training at the local USCG inspection office. In recent years, and accelerated by the COVID-19 pandemic, the training delivery method has

transitioned to online courses for new inspectors, with provisions for resident continuing education courses at periodical intervals for more senior inspectors. [...]. Ethical training is part of every USCG inspector's initial and periodical refresher training.

Also, once qualified, an inspector must perform at least one inspection on a given vessel type per year to keep his qualification. Otherwise, this inspector will be required to carry out inspections under the supervision of a qualified inspector to regain his qualifications (INT 2).

To overcome the challenge posed by the lack of technical and business understanding of the ROs, interviewees stated that more qualified and experienced inspectors are the ones selected to interact with ROs. Furthermore, INT 2 mentioned that the USCG is in the process to grow and expand its personnel's technical knowledge and auditing skills. This is done by enabling the recruitment of more civilians with appropriate backgrounds and by providing opportunities for the personnel already in service to attend International Safety Management Code (ISM Code) and ISO 90001 training.

In addition to the inspection workforce, the USCG has 09 personnel at the Flag State Control Division, 17 Third-Party Organization Coordinators, and 68 personnel at the Marine Safety Center in charge of direct oversight of ROs works (INT 1, 2, and 3).

Interviewees mentioned the difficulty for the oversight personnel to perform their daily work while keeping updated with the regulatory and technological evolution in shipping. Therefore, they suggest as a good practice for flag State administration to provide continued education and formalized training to the personnel in charge of oversight functions for avoiding knowledge gaps. For example, INT 1 mentioned

With respect to continuously improving the flag Administration's oversight of the ROs, it seems that one key component is continued education for the flag state inspectors and auditors. The IMO regulatory framework is constantly evolving, and it is very challenging to keep up with all the new regulations and requirements

that come into force, while also carrying out one's day-to-day duties. Even if an inspector/auditor received a robust initial training program, keeping abreast of the newest regulatory developments is challenging, and unless a formalized continued education program is provided, this can easily become a "word of mouth" or "trickle-down" approach that could misconstrue new requirements or lead to knowledge gaps.

4.3.2. Findings of the Quantitative Method

The first set of data, expressing to what extent responders think that the proposed items related to the flag personnel in charge of oversight activities are important, displayed that three of these items were judged "very important." These 3 items are related to the need for specific training, technical proficiency and an appropriate selection process of the flag States personnel in charge of oversight with respectively an average rate of 4.19; 4.24; and 4.14. Also, among the three, responders tend to agree more on the significance of the selection process because it displays the lowest standard deviation (Table 3).

Even though the importance of "the selection process" is the most shared belief among responders, the second set of data showed that most of the responders do not think that it should be among the three most important requirements for ensuring an effective oversight programme. That set of data also highlighted the significance of technical training for the personnel in charge of ROs oversight. To illustrate, 47% of the responders chose the need for specific training and the need for technical proficiency as the most important criteria to sustain an adequate level of proficiency for flag States' personnel involved in oversight roles of ROs (Figure 4).

Figure 4. *Most Important Requirements for the Flag State Personnel in Charge of Oversight Activities.*

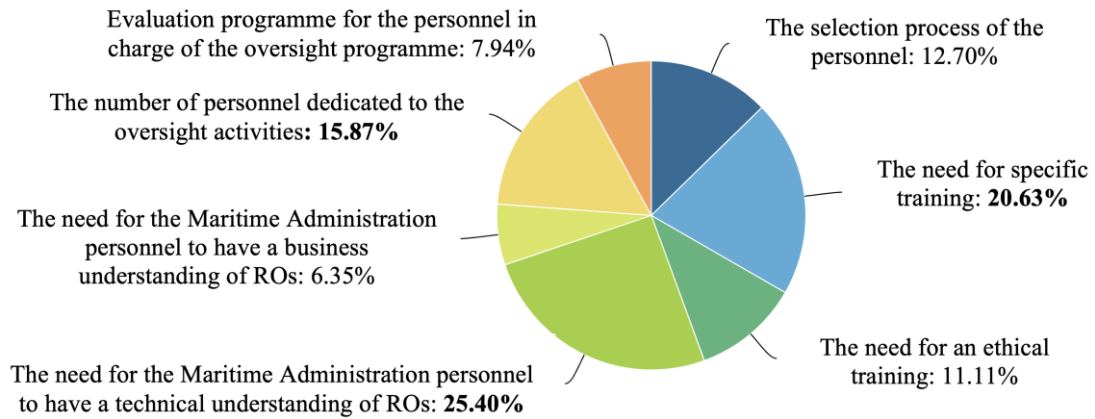


Table 3. *Evaluation of the Requirements for the Flag State Personnel in Charge of Oversight Activities*

	N		Mean	Median	Standard deviation
	Valid	Missing			
The selection process of the personnel	84	0	4.14	4.00	0.714
The need for specific training	84	0	4.24	4.00	0.816
The need for an ethical training	84	0	3.95	4.00	1.052
The need for the Maritime Administration personnel to have a technical understanding of ROs	84	0	4.19	4.00	0.857
The need for the Maritime Administration personnel to have a business understanding of ROs	84	0	3.33	4.00	1.255
The number of personnel dedicated to the oversight activities	84	0	3.71	4.00	0.830
Evaluation programme for the personnel in charge of the oversight programme	84	0	3.86	4.00	0.714

4.4. Oversight Activities: Planning, and Implementation

4.4.1. Findings of the Qualitative Method

According to the USCG guidance on navigation and vessel inspection, oversight activities consist of inspections and audits of ships as well as the audit and monitoring of shipping companies and ROs' activities (USCG, 2018). This oversight is done at

multiple levels. For example, the Flag State Control Division attends Accredited Certification Body (ACB) audits of the ROs headquarters. Also, the division can open Quality Cases¹⁷ to trigger internal investigations or root cause analyses when objective evidence indicates a potential failure of a RO's Quality Management System (See appendix J). As an illustration 06 Quality Cases were open in 2020 and 05 were adjudicated.

The Flag State Control Division is also granted unrestricted access to the ROs database for consulting safety records of U.S.-flagged vessels. Based on the observations from these data, it can conduct Concentrated Inspection Campaigns¹⁸ to focus on particular vessel systems or operations. Moreover, when there is evidence of Safety Management System failure within a shipping company, the Flag States Division can attend or direct additional Document of Compliance (DOC)¹⁹ verifications and audits. Additionally, it can implement direct Vertical Contract Audits (VCA) to verify the compliance of the product and the process. Since 2019, the USCG has issued the work instruction CVC-WI-008(1) explaining how to perform VCAs. Since 2018, the USCG has conducted four VCAs (NASEM, 2021). However, there are no explicit criteria to trigger such a type of audit. Also, interviews revealed that despite the establishment of the policy to

¹⁷ More details on the Quality Case are available in the USCG work instruction CVC-WI-005(3) available at the following link: [https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC_MMS/CVC-WI-005\(3\)%20Request%20for%20RO%20Internal%20QMS%20Review%20%20Quality%20Case.pdf](https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC_MMS/CVC-WI-005(3)%20Request%20for%20RO%20Internal%20QMS%20Review%20%20Quality%20Case.pdf)

¹⁸ According to the USCG Alternate Compliance Program, Tactics, Techniques and Procedures (CGTTP 3-72.9A) a “Concentrated Inspection Campaigns (CIC) focus on specific inspection areas based on trend analysis or when new requirements have recently entered into force. The commandant of the Flag State Control Division determines when to initiate these campaigns as well as the frequency and duration.” (https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/Guidance/CGTTP_3-72_9A_ACP.pdf)

¹⁹ The International Safety Management Code (ISM) requires that company operating vessels must develop and submit a Safety Management System (SMS) Manual for approval by their relevant flag States administrations or recognized organizations (RO). Each flag State or its ROs have to ensure the compliance of the company’s SMS with ISM Code requirements. Flag States administrations or ROs audit shipping companies and issue a “Document of Compliance” valid for 5 years to those found compliant with the code. In addition, each ocean-going vessel has to abide by the company’s SMS. Vessels in compliance are issued a Safety Management Certificate (SMC). This certificate is subject to verifications audits during its 5 years of validity (IMO. (2019). The International Safety Management (ISM) Code. <https://www.imo.org/en/OurWork/HumanElement/Pages/ISMCode.aspx>).

perform VCAs, “*field level flag state inspectors are not [yet] performing these type of oversight activities*” (INT 1).

Another level of oversight is done by the Maritime Safety Center. It has the responsibility to conduct the technical oversight of ROs’ by reviewing review plans and technical works performed on behalf of the USCG. It is also responsible for approving or denying equivalency requests made by ROs. Moreover, it participates in periodic meetings with ROs to review ROs’ performance related to technical aspects of statutory certification and services. Furthermore, it advises the Chief of Commercial Vessel Compliance on programme improvements concerning technical aspects. The following statement of INT 5 illustrated the technical oversight role of the MSC, “*the USCG technical branch, I mean the Marine Safety Center, at USCG Headquarters also carries out sampling-based oversight of plan review and other technical tasks performed by ROs on behalf of the Administration*” (INT 3).

The Officer in Charge of Marine Inspections (OCMI), who is also the USCG sector Commander, ensures that qualified Marine Inspectors perform the required oversight exams at the sector level. He has the authority to endorse and issue the Certificate of Inspection (COI)²⁰ and other required certificates for which the RO deliver DOCs. He is also responsible to ensure that Marine Inspectors evaluate the effectiveness of statutory certification and services performed by an RO on behalf of the Coast Guard.

The Third-Party Organization Coordinator has to ensure that Coast Guard field units are performing inspections and oversight under established program policies and the USCG Mission Management System. He also assists field units to evaluate potential

²⁰ According to the USCG rules, a RO can issue a certificate of compliance if the ship or the company inspected is compliant with the relevant requirements. Based on the information provided by the RO, the USCG evaluate if the ships or the company merits a Certificate of Inspection (COI). In other words, the COI is the endorsement by the USCG of the any certificate or document of compliance issue by a RO (NASEM. (2021). Strengthening U.S. Coast Guard Oversight and Support of Recognized Organizations: The Case of the Alternative Compliance Program. <https://doi.org/10.17226/26450>).

situations requiring additional DOC audits. Furthermore, he evaluates potential Quality Cases situations and serves as a quality assurance staff as well as the first-line review for Quality Cases. He coordinates USCG oversight actions with ROs' local offices. He also ensures that the USCG provides appropriate oversight when ROs' surveyors and auditors perform their delegated tasks.

As part of the annual inspection programme, the USCG inspects all commercial vessels in its fleet. This represents an opportunity to control the work done by ROs. INT 2 stated,

There is a formal oversight program of field-level inspections, in the sense that flag state inspections are carried out on an annual basis on almost all U.S. flagged vessels. So, these inspections provide a natural opportunity for oversight of the RO's performance at the point of service.

Interviews also revealed that participants share the view that inspecting a vessel just after inspections done by ROs is a good practice not only to assess the vessel's level of compliance but also to evaluate the efficiency of ROs to conduct delegated tasks as requested by the administration. INT 3 supported that idea by claiming,

“Carrying out onboard inspections of the vessels, after the RO completes their surveys for issuance of statutory certificates, allows the attending flag state inspectors to assess the efficacy of delegated functions performed by the RO after-the-fact at the point of service.”

Participants also shared the view that attending VCA may be an efficient practice to appraise the level of professionalism of ROs auditors and their aptitude to conduct properly their task. As an illustration, a participant affirmed,

“Attending ISM-Document of Compliance²¹ and ISM-Safety Management Certificate²² audits in the company of the RO auditor(s) allows the attending flag state personnel to assess the performance of the RO in real-time when the service is delivered.”

About planning, it is required that ROs notify the Flag State Control Division before performing any ISM code-related external audit for the issuance or verification of a shipping company’s DOC or vessel’s SMC. The notification time is 14 days for a DOC and 07 days for an SMC. However, interviews underlined that sometimes the USCG inspectors have little or no advance notice of the planned surveys because shipowners were providing ROs with short notice when requesting surveys and audits. Consequently, USCG inspectors and ROs surveyors were unable either to consult each other before inspections or to plan for joint inspections.

Also, the USCG relies on a risk-based approach to develop the Fleet Risk Index²³ used to target items requiring additional monitoring. In addition to that risk-based approach, items are also selected on a random basis sometimes or upon special request of the OCMI. This mix-targeting approach ensures that all types of work items completed by ROs are subject to USCG oversight. The risk-based approach developed by the USCG relies on a software called Marine Information for Safety and Law Enforcement (MISLE). This system presents several advantages and limits that will be discussed in detail in section 4.5.1.

²¹ See footnotes 18

²² See footnotes 18

²³ Fleet Risk Index is an annual risk assessment list that contains 10 percent of the ship attending the Alternative Compliance Program. The ships of this program are inspected by ROs. That list, which is not made public, is developed through a prioritization and risk assessment process to identify vessels posing a greater safety risk. Vessels on that list and their ROs are subjected to more scrutiny and additional oversight activities. Also, USCG inspections on these vessels are conducted by experienced personnel (NASEM. (2021). Strengthening U.S. Coast Guard Oversight and Support of Recognized Organizations: The Case of the Alternative Compliance Program. <https://doi.org/10.17226/26450>).

4.4.2. Findings of the Quantitative Method

The first and second sets²⁴ of data relative to the most appropriate oversight activity concurred to underline that most of the responders consider “auditing ROs quality management system” the most appropriate activity to oversee ROs with an average score of 4.24 (Figure 5 and Table 4). Also, “auditing ROs quality management system” is the practice with the lowest standard deviation of 0.873 meaning that responders tend more to agree on that choice as the most appropriate means to monitor ROs (Table 4). Among the two least ranked activities, responders tend to agree more that “developing and monitoring ROs’ KPIs” with a standard deviation of 0.926 is the less appropriate means to oversee ROs performance (Figure 5 and Table 4).

Figure 5. Best Activities for Oversight of ROs.

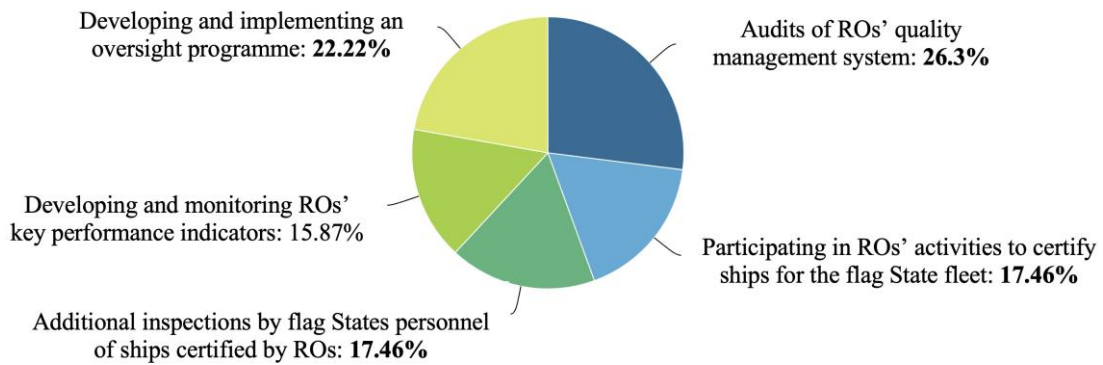


Table 4. Evaluation of the Activities for Oversight of ROs.

	N		Mean	Median	Standard deviation
	Valid	Missing			
Audits of ROs' quality management system	84	0	4.24	4.00	0.873
Participating in ROs' activities to certify ships for the flag State fleet	84	0	3.95	4.00	1.052
Additional inspections by flag States personnel of ships certified by ROs	84	0	3.52	3.00	1.187
Developing and monitoring ROs' key performance indicators	84	0	3.76	4.00	0.926
Developing and implementing an oversight programme	84	0	3.90	4.00	0.926

²⁴ See footnotes 11 and 12 for details

Both sets of data supported that the following three aspects are the most critical for successful planning of oversight by flag State administrations: defining audit criteria, establishing objectives of oversight activities and defining clear communication procedures with ROs (Figure 6 and Table 5). Their respective means are 3.81; 3.86; and 3.90 (Table 5). The mean and the median of these three practices showed that there are considered “very important” by most of the responders. Among these three practices, the one related to establishing and maintaining effective communication procedures with ROs has the least standard deviation 0.688 (Table 5). This meant that most of the responders’ rates of the significance of communication with ROs were convergent.

Figure 6. *Best Practices for Successful Planning of ROs Oversight Activities by the Flag State.*

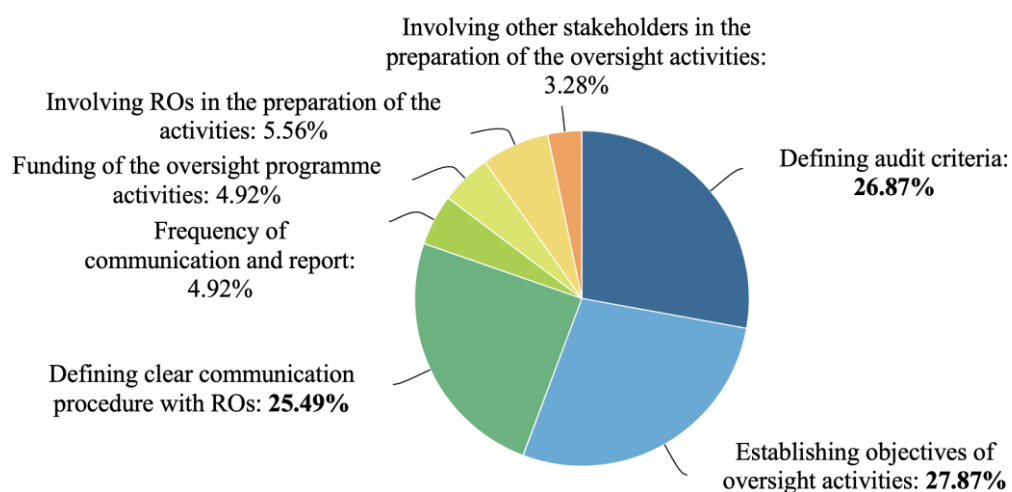


Table 5. *Evaluation of the Practices related to the Planning of ROs Oversight Activities by the Flag State.*

	N		Mean	Median	Standard deviation
	Valid	Missing			
Defining audit criteria	84	0	3.81	4.00	0.799
Establishing objectives of oversight activities	84	0	3.86	4.00	0.838
Defining clear communication procedure with ROs	84	0	3.90	3.00	0.688
Frequency of communication and report	84	0	3.48	4.00	0.667
Funding of the oversight programme activities	84	0	3.24	4.00	1.025
Involving ROs in the preparation of the activities	84	0	2.90	3.00	1.025
Involving other stakeholders in the preparation of the oversight activities	84	0	2.52	2.00	1.227

For a successful implementation of an oversight activity, responders share the view that the composition of the flag State team in charge of the activity (audit, inspections, or surveys) and communication with the ROs should receive more attention because they are the most important factors for success. There are both ranked of the three best ranked of both sets of data with a mean and percentage of 3.90 and 28.79% for the “composition of oversight” team and 3.86 and 27.27% for “communicating the objectives of the oversight activities to ROs” (Figure 7 and Table 6).

However, the almost equal distribution of responders’ views suggests that the two other aspects related to high-level audits (22.73%) and keeping a record of oversight activities (21.21%) should be considered also a significant feature during the implementation phase of oversight activities. (Figure 7 and Table 6)

As same as during the planning phase, responders’ views were more convergent on designating practices related to communication as the most important element to consider during the implementation phase. Its standard deviation was 0.643 (Figure 7 and Table 6)

Also, “keeping records of oversight activities” has an average rate of 3.95 and that average rate was the highest among all the items (Table 6). Despite this highest average, 78.79% of the responders did not choose it among the three most critical practices for an efficient oversight programme (Figure 7). This might highlight that gathering data is not enough for implementing successful oversight activities. There is also a need to review and process data gathered with analytical capabilities (software or humans) for providing exploitable information necessary for effective oversight of ROs. Without data processing, “keeping records of oversight activities” as a standing alone practice cannot add value to oversight programmes.

Figure 7. Best Practices for Successful Implementation of ROs Oversight Activities by the Flag State.

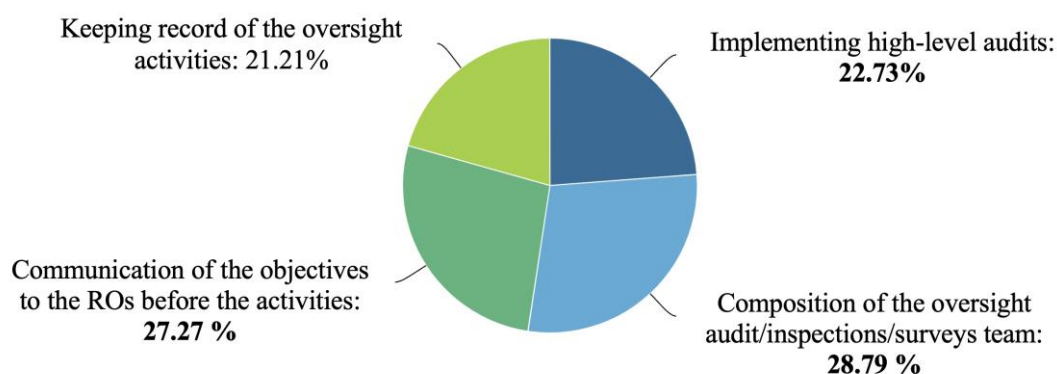


Table 6. Evaluation of the Practices related to the Implementation of ROs Oversight Activities by the Flag State.

	N		Mean	Median	Standard deviation
	Valid	Missing			
Implementing high-level audits	84	0	3.67	4.00	0.896
Composition of the oversight audit/inspections/surveys team	84	0	3.90	4.00	0.816
Communication of the objectives to the ROs before the activities	84	0	3.86	4.00	0.643
Keeping record of the oversight activities	84	0	3.95	4.00	0.790

4.5. Evaluation and improvement of oversight programmes

4.5.1. Findings of the Qualitative Method

The USCG is subjected to internal and external audits to ensure that it fulfils its mission and delivers high-quality service. At the internal level, the USCG implements its own quality management system called Mission Management System (MMS). The MMS is an ISO 9001/2015-based quality management system allowing the USCG to satisfy its domestic and international obligations for marine safety and security as well as maritime environment protection. Interviews revealed that under this management system, oversight practices are regularly audited for improvement. That idea was supported by INT 2,

“Periodical audits are carried out at both the head office and individual field office levels, both internal [meaning that] designated auditors from an office carrying out the audit of the same office and external [meaning that] separate USCG office, from the Force Readiness Command, carrying out the audits.”

For the external audit, the USCG is a participant in the IMO Member State Audit Scheme (IMSAS) which also review the conformity of the oversight practices with the RO code. For illustration, the U.S has gone through an IMSAS in 2022 from February to March with more than 70 participants (USCG, 2022). Interviewees claimed that the USCG capitalizes on this opportunity to improve its MMS process.

As evaluation and improvement tools the USCG uses the Marine Information for Safety and Law Enforcement (MISLE) database. It is used to record data on vessels’ inspections and examinations, marine accidents, pollution incidents, search and rescue cases, and law enforcement activities. In 2021, a mobile application version was developed as a job aid to allow USCG inspectors to access in real time the information of MISLE from the field. As a database, it helps the USCG’s headquarters to review the safety history of vessels, companies and ROs to determine KPIs as well as areas that need special oversight focus.

A study report commanded by the USCG revealed that MISLE is not suited to support vessel compliance verification by marine inspectors and ROs (NASEM; 2021). Also, this application does not allow efficient monitoring of ROs by the USCG because its design is outdated and its data incomplete and unreliable. Consequently, the ROs' KPIs have less relevance to RO performance and compliance. This report recommends that the USCG collaborates with ROs to develop relevant KPIs for oversight purposes and better profiling of vessels on a performance and risk assessment basis. INT 3 provided the following comments,

“In recent years, updates to this application [MISLE] have provided the ability to record the results of various RO oversight activities within a newly created Management System Oversight (MSO) tab. This includes a recording of USCG observations of ISM-Document of Compliance and ISM-Safety Management Certificate audits, Quality Cases, Third-party Organizations and RO oversight activities, etc... but improvements are still required because it does not include enough data about USCG findings from RO oversight”

The evaluation of a RO's poor performance can lead to the suspension of the approval given to that RO to perform delegated tasks. This suspension can also be partial and include individual auditors or surveyors. First, the USCG will provide details to the RO about its failure to comply with the delegation agreement. Then, the suspension will happen if the RO fails to correct the mentioned deficiencies.

Also, the USCG can revoke the approval given to a RO when that RO demonstrates a pattern of failure to comply with delegation agreement or when substantial deviations—such as ethical violations, conflict of interest, or inadequate performance indicating the inability of that RO to carry out its duties— occur. USCG regulations, 46 CFR part 139, provide the procedure to appeal suspension and revocation orders emitted by the USCG.

For improvement, the Flag State Control Division convenes an annual conference for USCG inspectors to increase inspectors' awareness of policies and procedures related

to ROs functions and to provide more information on programs that involve third-party delegations. Also, the Flag State Control Division organizes quarterly and annual summits with ROs for discussions and exchange of ideas in order to overcome common challenges and achieve their common safety goals. Moreover, since 2017, the USCG has published Flag State Control Annual Report which not only includes various data regarding activities performed by ROs Flag but also serves as a waypoint to study trends and bring attention to issues in the fleet.

Despite this effort, the report of the expert committee on ROs oversight called for more transparency concerning ROs' Key Performance Indicators (KPI) assessment and MISLE access. Also, the 2018 Hamm Alert Maritime Safety Act called for more transparency by identifying on a publicly accessible website any "RO that inspected or surveyed a vessel that was later subject to a Coast Guard-issued control action attributable to a major nonconformity that the recognized organization failed to identify in such inspection or survey."

4.5.2. Findings of the Quantitative Method

The survey result (from both the table and the figure) pinpoints that external audits of oversight systems and the establishment of follow-up procedures are the most appropriate practices to evaluate and improve ROs oversight by flag States. The capacity of a flag State administration to set up adequate follow-up procedures to deal with deficiencies revealed during oversight activities has the lowest standard deviation of 0.613 (Table 7). This means that the responders' views are more convergent to designate that practice as adequate to improve oversight practices. The development of analytic software to enable an efficient data-driven approach was ranked the fourth most appropriate evaluation method with 14.29% (Figure 8).

Figure 8. *Best Practices for Successful Evaluation and Improvement of ROs Oversight Programme.*

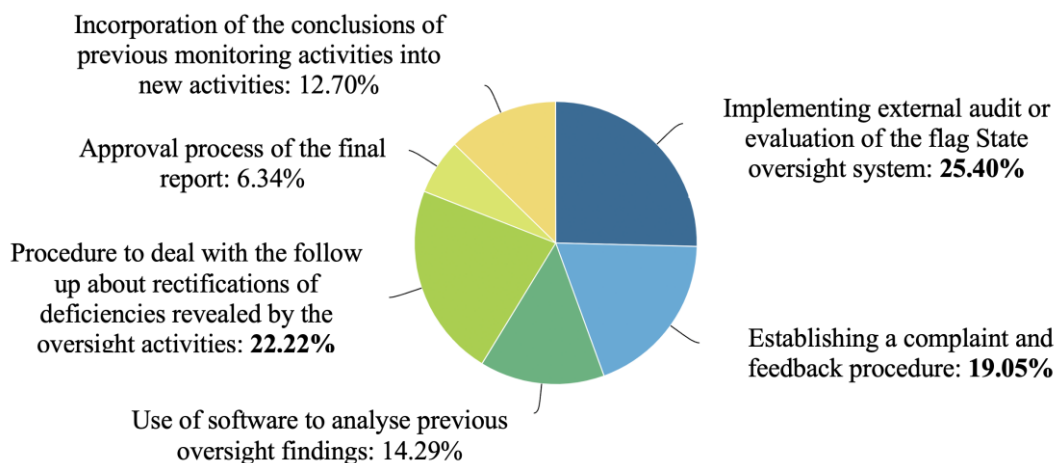


Table 7. *Evaluation of the Practices related to Evaluation and Improvement of ROs Oversight Programme.*

	N		Mean	Median	Standard deviation
	Valid	Missing			
Implementing an external audit or evaluation of the flag State oversight system	84	0	3.81	4.00	0.857
Establishing a complaint and feedback procedure	84	0	3.71	4.00	0.830
Use of software to analyse previous oversight findings	84	0	3.52	3.00	0.736
Procedure to deal with the follow-up about rectifications of deficiencies revealed by the oversight activities	84	0	3.90	4.00	0.613
Approval process of the final report	84	0	3.48	4.00	0.857
Incorporation of the conclusions of previous monitoring activities into new activities	84	0	3.71	4.00	0.704

4.6. Impact of Global Disruption and Relevance of Joint Programme, and International Quality Assessment Review Body (IQARB)

4.6.1. Global Disruption: The Case of COVID-19

In the American case, interviews showed that oversight programmes for ships operating in the USA were moderately impacted by a global disruption such as COVID-19. Even though inspections continued, they were done under restrictive rules

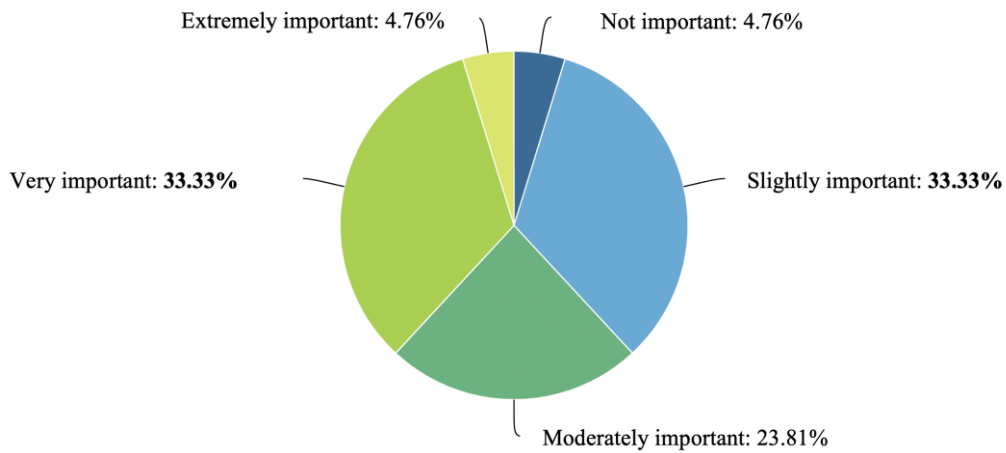
provided by sanitary authorities. For U.S.-flagged vessels exclusively operating abroad, the oversight programme was more impacted because of the travel restrictions imposed during the COVID-19 global disruption. One of the measures to mitigate the impact of COVID-19 was the transition to remote inspections. Also, the ROs oversight programme are generally yearly activities and the pic of the sanitary crisis lasted less than two continuous years; therefore, USCG could find windows to conduct its most important oversight activities.

INT 2 depicted the impact of COVID-19 in the following terms:

“COVID-19 limited the opportunities for in-person meetings and visits with our RO colleagues. In some instances, particularly for U.S. flagged vessels exclusively engaged in overseas trade that do not return to the U.S. mainland, travel restrictions associated with COVID-19 precluded in-person attendance by flag state inspectors. In these cases, remote inspections were sometimes conducted. However, as the COVID-19 situation somewhat improves, and travel restrictions lessen, the USCG has returned to in-person annual inspections of U.S. flagged vessels, and it is resuming in-person meetings with its RO colleagues.”

Participants’ responses to survey questions are almost equally distributed with 33% thinking that the effect of COVID-19 on the ROs oversight programme was “very important” and the other 33% believe that the effects were slightly important (Figure 9). The average score of 3 given by responders showed that the impact of COVID on ROs’ oversight is considered “moderate” generally (Table 8).

Figure 9. *Impact of COVID-19 on Oversight of ROs by the Flag State.*



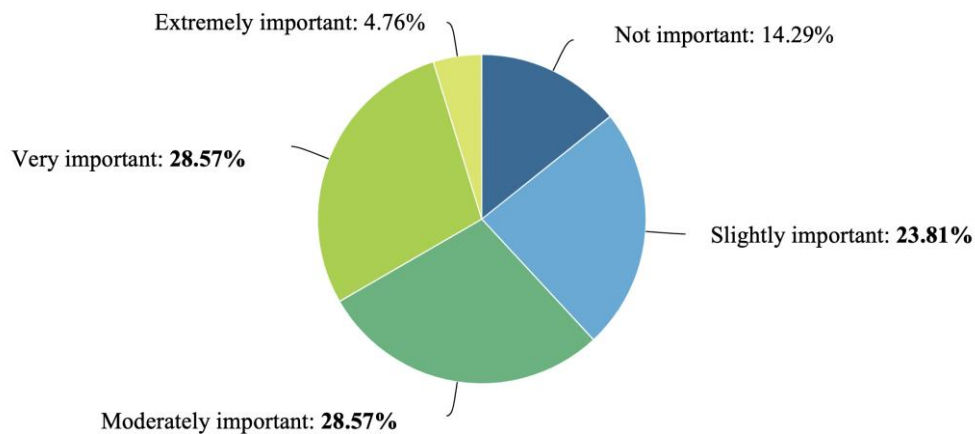
4.6.2. Combined Oversight Programmes

The RO Code part III section 7.2.2.2 authorizes countries to enter into written agreements with others to develop combined oversight activities when they have delegated their tasks to the same ROs (IMO, 2013). The USCG has Memoranda of Cooperation (MOC) with over agencies in charge of ROs oversight such as the Department of Transport of Canada or the Directorate General for Mobility and Transport of the European Commission. The MOC with Canada aims at information sharing for coordination purposes regarding the oversight of common ROs in both countries (USCG & the Department of Transport of Canada, 2016). For the MOC with the European Directorate General, the agreement allows joint oversight activities (USCG and Directorate for Mobility and Transport of the European Commission, 2020). Interviewees acknowledged the significance of such a cooperation framework. As an illustration, INT 3 shared his experience of attending, as an observer, an audit conducted by the European Maritime Safety Agency (EMSA),

I did not actively participate in the audit or ask any questions to the RO audited... [but] I found the attendance very informative, and it was interesting to see what focus items other flag Administrations had with respect to works that ROs perform on their behalf.

Opinions expressed by the survey’s participants do not permit drawing a clear conclusion on the significance of combined oversight programmes. The result shows an almost uniform distribution of views between “very important,” “moderately important,” and “slightly important” (Figure 10). This dispersion of views is confirmed by the standard deviation of 1.132 which is the biggest among all the three aspects considered in this section (Table 8).

Figure 10. *Relevance of combined oversight Programme for Enhancing ROs' oversight by the Flag State.*



4.6.3. International Quality Assessment Review Body (IQARB)

IQARB is a project under development and it is in its trial phase. It was initiated by Liberia, Marshall Islands, New Zealand and the International Association of Classification Societies (IACS) as a proposal paper at the 100th session of the IMO Marine Safety Committee in 2018. It aims to assist flag States to oversee their ROs according to relevant IMO instruments such as IMO Instruments Implementation Code (III code) and the RO Code. There is a vision to make it a fully independent quality assessment review body working under an international legislation framework with its own standards for qualifying all ROs. At the current stage, its scope of application is limited to the IACS members (IMO, 2013a; IMO, 2013b; IMO, 2019b; Liberia et al, 2018).

USCG personnel interviewed admitted their limited knowledge of the topic and preferred to not elaborate on the topic to avoid any confusion with the USCG official position.

Concerning the quantitative assessment, the survey revealed a positive view from the responders with 38% estimating that it is “very important” and 33% believing that is “moderately important” (Figure 11). The standard deviation of 0.904, which is the lowest among the three topics discussed under section 4.6, shows that the views of the respondent are less dispersed about the capacity of IQARB to improve flag State oversight programmes (Table 8).

Figure 11. *Relevance of IQARB for Enhancing ROs Oversight by the Flag States.*

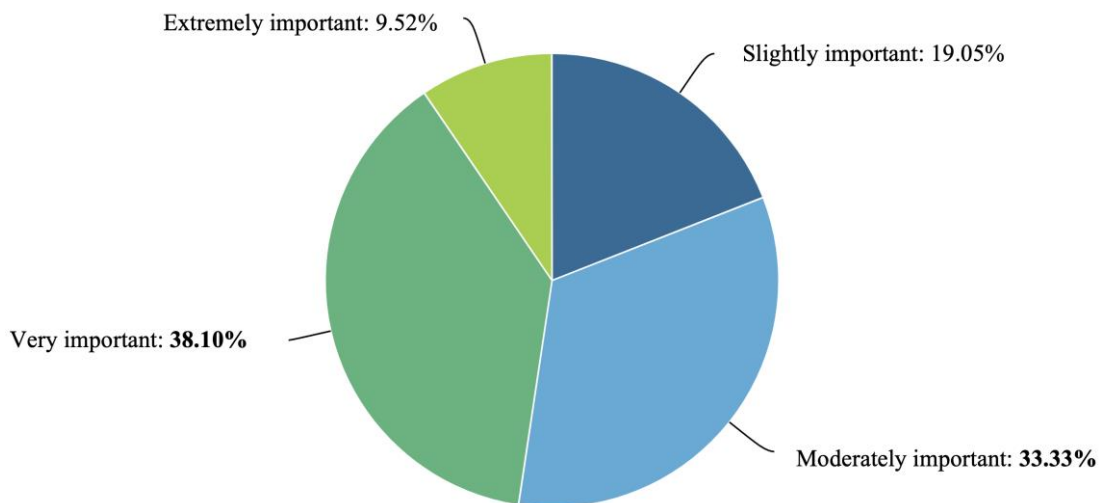


Table 8. *Evaluation of the Impact of COVID-19, and the Relevance of combined Oversight Programme and IQARB*

	N		Mean	Median	Standard deviation
	Valid	Missing			
The impact of COVID 19 on the effectiveness of oversight programme	84	0	3.00	3.00	1.030
Implementation of combined oversight programs with other countries	84	0	2.86	3.00	1.132
Relevance of the International Quality Assessment Review Body (IQARB) system	84	0	3.38	3.00	0.904

After displaying the main findings in this chapter, the next chapter will synthesize and provide interpretations of these findings. Also, it will evaluate patterns and ambiguities in light of the research questions, the conceptual framework guiding the research, and theoretical frameworks presented in the literature review. Then, it will present the limitations that need to be considered when assessing the final results of this research.

Chapter 5 Discussion

The USCG study case demonstrates that the delegation of statutory duties to highly qualified ROs should not prevent the implementation of a robust oversight programme. Despite the highly selective criteria of the USCG to choose their ROs (see Section 4.1), the findings in the previous chapter (see Section 4.1, 4.2.1, 4.3.1, 4.4.1, and 4.5.1) display the changes undertaken by the USCG after the El Faro accident²⁵ and demonstrate the necessity for an efficient oversight programme (see Appendix K for the main changes in the USCG oversight framework). These changes and the survey findings (Figures 6 and 7) support the need for consistent communication between flag State administrations and ROs through an open-dialogue and regular engagement. This is concordant with the principal-agent approach to addressing the problem of information asymmetry between a principal and the delegated agent. Müller & Turner (2005) recommended significant investments into communication between the principal and its agents to provide each other with the required information necessary to build trust and overcome emerging issues.

Also, findings display that the structural organization of flag State administrations is essential to a successful oversight framework (Figure 3). Gong et al. (2017) arrived at the same conclusion when analysing the production coordination between a principal and its agents. Their study concluded that mechanism design or structural organization is a solution to principal-agent problems by focusing on coordination aspects. However, the quasi-totality of the RO's personnel who responded think that the structural organization of flag State administration is not decisive for a successful oversight programme (Figure 3). The semi-structured interviews undertaken to evaluate the result of the survey shows that the opinion of the RO's personnel needs a deeper analysis.

The view of the RO's personnel should not be interpreted as an opposition to the creation of a specific service within the flag State administration in charge of oversight

²⁵ See sections 1.2 and 3.3 for more details

activities. From a RO perspective, the determinant factor is the capacity for the administration to maintain consistent and efficient communication regardless of the organizational framework adopted by the flag State administration. From a flag State point of view, adopting an organizational structure with a standing-alone service dedicated to RO oversight is a sign that ROs' oversight is becoming a priority on the flag State administration's agenda. In other words, oversight activities could get more resources to enable a consistent engagement with ROs. Consequently, the ROs and flag State administrations' perspectives are not necessarily contradictory.

Also, the evaluation discussion highlighted the fact that the Maritime Administration office in charge of ROs' oversight may be set up as a project management office with more emphasis on coordination, and data gathering and processing. The flag State personnel working in that dedicated office does not need necessarily to be technical experts. As described by INT 4, the personnel of this office should be someone with *“appropriate coordination, communication and analytical skills, in-depth comprehension of ROs functioning, and broad technical knowledge but not necessarily a technical expert”*. He continued to mention that deep technical expertise is an absolute requirement for flag States field personnel such as auditors and inspectors.

To properly set up an oversight service, flag State administrations also need to consider other aspects such as the size of their fleet, the number and quality of their ROs, and most important the quantity of information that is coming from their ROs (INT 4, INT 5, and INT 6). More incoming information will require more working time for processing, analysis and synthesis. Adequate digital solutions and artificial intelligence will certainly help in that process. But before applying these solutions, there is a need for centralization of information relevant to ROs activities for guiding flag State oversight programmes. From that perspective, it appears necessary to provide dedicated oversight personnel or service according to the amount of data to review. This is supported by the following statement of the INT 6,

“You need resources to review the documentation and reports coming from the ROs. Maritime administrations request their ROs to send regular updates

about activities conducted on behalf of flag States. But, one point is to receive the information and another is to do something with the information by reviewing it. If you just file it, it doesn't help for anything. So, if you have the reports of a surveyor, it is meaningless if you do not look into them. Just having them, doesn't help a flag State. Again, you need to allocate resources for oversight activities.”

Concerning the personnel, flag States oversight frameworks must consider how to maintain the technical proficiency of its workforce. In the American example, the USCG increased the recruitment of personnel with adequate backgrounds and offered the possibility to the personnel already serving to get more specific training (see Section 4.3.1). Also, answers to the survey pinpoint the necessity for flag State personnel to be technically at the level of their ROs counterparts (see Section 4.3.2). This requirement is inherent to the functions that flag State personnel needs to fulfil their oversight roles. Oversight of ROs requires not only technical skills to understand the tasks to perform but also a systematic review of performed tasks to assess their conformity with regulations. Hence, flag State personnel in charge of ROs oversight needs technical and auditing skills. However, it may be difficult for them to keep up with technological and regulatory development if their flag State oversight framework does not provide the opportunity for formal continued training (see Section 4.3.1). On-the-job self-learning should be a complement to formal training programmes but not a substitute (Baran et al., 2000); otherwise, this practice can lead to knowledge gaps and inappropriate practices.

The USCG oversight case study underlined difficulties to developed suitable KPIs for assessing ROs' performance. It also revealed the need to associate ROs to overcome challenges posed by KPI development (see Section 4.4.1). In a principal-agent relationship, Banker & Kemerer (1992) demonstrated that the criteria to establish performance metrics should include precision and sensitivity. Thus, it may be a challenge to develop the appropriate performance metrics. That challenge to develop appropriate KPIs for evaluating ROs can explain the choice of the survey responders

to designate “the development and monitoring of ROs KPI” among the least appropriate methods to oversee ROs performance (see Figure 5). However, the USCG's choice of combining ROs offices' audits and field inspections to improve its oversight programme concurs with the views displayed during the evaluation interviews. For example, INT 5 expressed that auditing ROs offices without field inspections to have a look at the final product is meaningless.

“A classification society or RO head office [talking about IACS member] is audited at least once a month, so all the people in that head office who are dealing with the auditors are familiar with the audit process. They have heard any question and answered any question every two or three weeks. So, you don't gain very much unless you want to have a very specific look into a specific ship where only the head office has the necessary technical documentation available... One of the most effective means of ROs oversight or monitoring is flag State inspections. Even though you don't look at the ROs specifically, you look at the product they are delivering, the certified ship. So, if a certified ship is not in accordance with the regulations or requirements, then they obviously did not do a good job.”

Based on that assessment, Vertical Contract Audits (VCA)²⁶ represent an effective oversight practice. It permits looking at the ROs procedures, services delivered and final products. In a VCA, flag States personnel join ROs' surveyors and observe their activities on the field (on board ships or in shipping companies). During a VCA, flag States' oversight personnel observe ROs' surveyors during the preparation, implementation and post-inspection phases. Therefore, it provides a real picture of ROs' working practices and “*not an abstract process in a head office,*” as stated by INT 6. A VCA also offers flexibility with possible cost savings because the flag State administration can schedule such activity when ships arrive at home ports or at least

²⁶ The RO code makes mandatory for ROs to conduct VCA annually as a mean of performance measurement, analysis and improvement (RO code part 2). The Code does not consider VCAs in part 3 which provides the guidelines for oversight activities undertaken by flag States administrations.

in the closest port to the flag State. However, it requires highly qualified personnel able to assess technically their ROs counterparts.

At the planning and implementation stage, answers to the survey spotlight the significance of defining clear objectives for oversight activities and clear communication procedures with the assessed RO (see Section 4.4.2). This is in line with USCG appointing Third Party Organization Coordinators (TPOC) to engage local ROs representatives and improve the planning of oversight activities (see Sections 4.2.1 and 4.3.1). The TPOC, as a civilian employee of the USCG, is not subject to the obligation of USCG military personnel of changing assignment positions every two or three years. In other words, the USCG will have the opportunity to develop a strong and long-lasting relationship with ROs at the local level. This will facilitate communication between ROs and USCG and the planning of oversight activities at the local level.

For the evaluation and improvement of oversight programmes, the USCG opted for an approach based on internal and external audits as well as KPIs development (see Section 4.5.1). As for the responders to the survey, they prefer “external audits” as the appropriate means to evaluate and improve ROs oversight frameworks (see figure 8). Because of the difficulty to develop adequate KPIs for assessing ROs’ performance, the choice of “external audits” by the survey responders might appear as the convenient approach to evaluate and improve oversight programmes set up by flag States.

Concerning the eventual disruption of oversight programmes due to situations such as COVID-19, both the USCG example and survey responders’ answers show that flag states were able to adapt by shifting to remote inspections and audits (see Section 4.6.1). If the COVID-19 effects have been more significant on seafarers and shipping activities (Michail & Melas, 2020; Pauksztat, et al., 2022), the findings in section 4.6.1 suggest that its effect on the oversight programme was moderate due to the adaptability of flag State administrations and ROs in conducting remote oversight activities.

Despite, the benefit that combined oversight activities can offer, as exemplified in the USCG case, the opinions of responders to the survey were not favourable to such activities (see section 4.6.2). The interviews of experts for discussing and assessing survey results indicated that the challenges to planning joint oversight and the divergence among flag State requirements to their ROs might explain the reticence of responders to value combined oversight activities as an appropriate means to monitor ROs. Therefore, providing mechanisms to facilitate the implementation of combined oversight activities will unveil the potential of this oversight activity, as exemplified by the European Maritime Safety Agency. This agency provides a unique collaboration platform for oversight of ROs acting on behalf of member States of the European Union (EU). Only ROs recognized by the EMSA can act be authorized by member states of the EU. Also, the EMSA conduct different oversight activities for monitoring ROs on behalf of the European Commission and all member States (EMSA, 2022).

The positive opinion of survey responders about the development of the International Quality Assessment Review Body (IQARB) is consistent with their choice of designating audits as the most appropriate means to oversight ROs (see Section 4.6.3). In other words, responders perceive audit procedures implemented by IQARB as an extension of their preferred oversight practice. The interviews with experts to assess the result of the survey concede that IQARB development will have a positive effect on ROs' oversight; however, it will not replace the need for flag States to engage continuously their ROs to solve emerging challenges related to oversight activities.

In summary to the discussion undertaken in that chapter, an effective ROs oversight programme can be characterized as a systematic and adequately-resourced programme that relies on the following practices: a dedicated coordination office or personnel with a project management mindset who regularly engage its ROs counterparts and direct highly qualified flag States personnel to implement systematic oversight activities. This oversight programme should be evaluated and improved through regular external audits.

This overall framework can be compared to critical parts of a ship. The following five aspects considered during this research, namely organizational structure, personnel requirement, planning, implementation, and evaluation/improvement represent respectively the bridge, the crew, the communication equipment, the propulsion system and the hull of the ship.

Like the bridge, the organizational structure of the ROs' oversight framework should allow a good overview, appropriate situational awareness and effective coordination of all activities related to ROs oversight.

For the personnel, an effective oversight programme relies on more people than the personnel at the oversight office as same as any ship relies on all the crew and not just the personnel at the bridge. It is the daily work performed by each qualified crew in its domain of expertise that maintains the safety of the ship. Equally, it is the daily work performed by a qualified flag state inspection workforce that sustains the overall oversight framework.

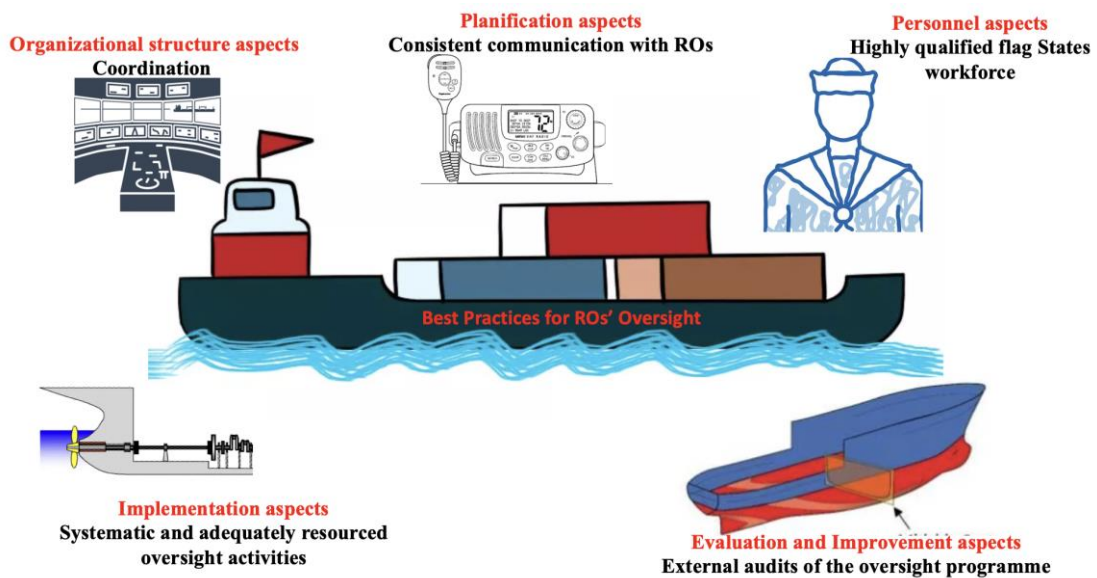
Concerning the planning phase, it is essential for the personnel in charge of ROs oversight to keep permanent communication not only with their RO counterparts but also with the flag State workforce to provide the support needed when required. This is the same for the personnel at the bridge who needs to use the communication equipment to direct the crew but also communicate with external actors for the safety of the ship.

The implementation phase should be systematic and adequately resourced to allow the proper functioning of the framework. In the same way, the propulsive system of a ship requires a systematic maintenance programme. Oversight activities like engine maintenance should not be coincidental but properly planned and adequately resourced.

For the evaluation and improvement aspects, like the hull of any ship, the oversight programme needs to be checked periodically from the outside to ensure that it is fulfilling its purpose.

Figure 12. Representation of the guiding principles for oversight programme best practices.

Source: Author.



Appraising the result of this research requires considering the following limitations. There were many cases of flag State administrations reluctant to disclose information about their oversight practices because it could lead to the release of sensitive information. However, the researcher critically assessed and analysed data gathered by considering multiple perspectives within the scope of the research aim and objectives.

As with any single case study, the results of this research are influenced by the intrinsic characteristic of the chosen case making it difficult to generalize the results. Despite the researcher's solution to supplement the case study with a quantitative survey, the relative few numbers of responders remain a limitation to allow firm ground for the generalization of the study. Even though the nationality of the participants was

diversified (15 different nationalities), the number of responders is a point that can be improved in further studies.

Several aspects determinant for understanding oversight activities such as criteria for establishing RO's key performance indicators are not publicly available. Also, getting access to representatives of flag States administrations was not always possible. Hence, the picture depicted in this research may lack some insight and details. However, participants were selected based on their experience and ability to provide the necessary information for this study.

Also, travel restrictions and lack of financial means prevent the researcher to conduct field research. This would have provided more opportunities for the researcher to get insight into the oversight practices as they are done in the field. This study relies mainly on data collected from regulations analysis, self-reported practices, beliefs, opinions, and perceptions collected during interviews and surveys. Unfortunately, such self-reporting can deviate from reality. Therefore, additional investigations through local observations to correct this deviation and examine flag States' oversight practices may be necessary.

Chapter 6 Conclusions

ROs oversight is a crucial topic for ensuring that flag States are fulfilling their national and international obligations. As flag States' agents to provide statutory services, ROs are significant contributors to enabling a safe, secure and environmental-friendly shipping industry. Flag States' oversight programme to monitor their ROs need to be systematic and adequately resourced. Overseeing ROs should not be a coincidental task but it should take advantage of the daily inspections and activities done by flag States and port States personnel to check the conformity of the final product (ships or shipping companies) and the performance of ROs in discharging their delegated tasks.

Delegating more statutory services to ROs increases the need for adequate oversight by flag States administration. Through the USCG example, that study highlighted the requirement for an effective oversight programme even when the delegation process to ROs is particularly selective. Delegating tasks to highly qualified ROs should not prevent flag State administrations to develop adequate organizational structure, qualified human resources, clear planning and implementation procedures, as well as efficient evaluation and improvement process to oversee their ROs.

Organizational structures adopted by flag States may display the level of priority given to oversight questions in the administration agenda. Regardless of the configuration adopted, the oversight organizational structure should enable effective communication between flag States and their ROs. This communication should concern regulatory and technical aspects at both the headquarter level and the field level.

Technically qualified human resources are required to fulfil oversight functions. Delegating inspection and audit tasks to ROs does not remove flag States' obligation to develop technically highly qualified personnel. To effectively control ROs' works, flag States administration must have personnel capable of technically understanding the tasks that ROs are supposed to perform. Also, to assess ROs performance, flag States personnel needs to be familiar with audit practices. Allowing flag States personnel to have access to continuous and formal training is critical to keeping them

updated with technological and regulatory changes happening within the shipping industry.

The study highlights that audit of the quality management system is the most preferred practice to oversee ROs. This might facilitate the adoption of the IQARB initiative. However, audits need to be completed by field inspections which are the appropriate way to control the service executed by ROs at the point of delivery.

The success of the planning phase of an oversight activity is linked to well-defined objectives and clear communication procedures with ROs. Furthermore, for a successful implementation of the planned activities, this study shows that the composition of the flag State oversight teams needs to be carefully considered. Because of the technicality and the diversity of works that may be performed by ROs, the team in charge of the inspections and audits has to be made of the appropriate expertise to control and evaluate the tasks delegated to ROs.

For evaluation and improvement of oversight programmes of flag States, the study shows that external audits are the most suited practice. Also, it reveals that developing relevant KPIs to assess ROs performance may be challenging. Therefore, it suggests close cooperation between flag State administrations and ROs to develop the most suited KPIs to appraise how well the latter discharge their delegated tasks. On top of these evaluation practices, flag States need to remember that consistent, constructive and open dialogue with their ROs remains the efficient way to foster the overall oversight framework.

The study supports the significant role played by the adoption of technological solutions to overcome challenges posed by a global disruption such as COVID-19. The implementation of online oversight activities mitigated the effect of COVID-19 on the ROs' oversight programme. Also, the research demonstrates that cooperation between countries to set up combined oversight of their ROs presents opportunities to enhance oversight programmes; however, the challenges related to the planning and implementation of such activities make it less attractive.

In light of the conclusions of this research, the following recommendations can be made:

- Part 3 of the RO code should be made mandatory to display the significance of the issue of ROs oversight. Part 3 should also incorporate Vertical Contract Audits as an oversight activity to be done by IMO member States.
- IMO should continue auditing flag States' frameworks for oversight of ROs during IMSAS audits because it represents an opportunity for improvement of flag States' practices. The adoption of the IQARB project can also provide an opportunity for better oversight of ROs.
- IMO and flag States should consider mechanisms to encourage and facilitate combined oversight programmes. Existing Port State Control Memorandum of Understanding groupings may be considered as a working basis;
- Flag States administrations should value transparency and allow external audits of their ROs oversight programme as a way for improvement;
- Flag State administrations should maintain regular and open dialogue at all levels (from headquarters to field) and on all aspects (technical and regulatory) with their ROs to develop relevant oversight metrics and practices;
- Flag State administrations should develop training programmes to keep up-to-date the technical, regulatory, and auditing knowledge and skills of their oversight personnel;
- Flag States' oversight programmes should continue to incorporate technological capabilities to make their oversight programmes resilient to global disruption while paying attention to challenges inherent to the adoption of these new technologies.

To extend the research on the topic, further studies might consider a comparative analysis of selected flag States with a great number of ROs such as Panama, or countries that have developed a specific framework of ROs oversight such as Marshall

Island with its International Registries²⁷ or Denmark with the open-dialogue approach.²⁸ This comparative analysis will offer new perspectives on ROs' oversight practices and reveal more good practices for the oversight of ROs by flag States administrations.

²⁷ International Registries, Inc. and its affiliates (IRI) is a privately held maritime and corporate registry service providing administrative and technical support to the Republic of the Marshall Islands (RMI) Maritime. It is deeply involved in the oversight of the ROs acting on behalf of the Marshall Islands. <https://www.register-iri.com/>

²⁸ Olsen, T. A. (2017). Does the oversight model lead to power relations in terms of empowerment or responsabilization? [Master's thesis, Lund University]. <https://www.lu.se/lup/publication/8927030>.

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Appendix

Appendix A: List of Countries and their ROs (extracted from GISIS database)

N°	Countries	Number of ROs	N°	Countries	Number of ROs
1	Albania	01	39	Eritrea	02
2	Algeria	05	40	Estonia	06
3	Antigua et Barbuda	12	41	Ethiopia	02
4	Argentina	05	42	Fiji	06
5	Australia	08	43	FAS (Faeros, Denmark)	01
6	Austria	05	44	Finland	07
7	Azerbaijan	08	45	France	05
8	Bahamas	13	46	Gambia	04
9	Bahrain	11	47	Georgia	10
10	Bangladesh	07	48	Germany	09
11	Barbados	23	49	Ghana	02
12	Belgium	07	50	Gibraltar (United Kingdom)	06
13	Belize	25	51	Greece	12
14	Bermuda (United Kingdom)	06	52	Guernsey (United Kingdom)	05
15	Brazil	07	53	Guinea Bissau	10
16	British Virgin Island (United Kingdom)	06	54	Honduras	11
17	Brunei Darussalam	07	55	Hong Kong (China)	09
18	Bulgaria	06	56	Hungary	04
19	Cabo Verde	01	57	Iceland	03
20	Cameroun	05	58	India	08
21	Canada	07	59	Indonesia	01
22	Cayman Island (United Kingdom)	06	60	Iran (Islamic Republic of)	08
23	Chile	05	61	Ireland	07
24	China	01	62	Isle of Man? (United Kingdom)	07
25	Colombia	07	63	Israel	04
26	Comoros	23	64	Italy	05
27	Cook Islands	18	65	Jamaica	12
28	Costa Rica	07	66	Japan	04
29	Croatia	03	67	Jersey (United Kingdom)	02
30	Cuba	02	68	Jordan	14
31	Curaçao (Kingdom of the Netherlands)	06	69	Kazakhstan	05
32	Cyprus	12	70	Kenya	04
33	Czechia	05	71	Kiribati	13
34	Democratic PR Korea	01	72	Kuwait	08
35	Denmark	10	73	Latvia	07
36	Djibouti	08	74	Lebanon	16
37	Dominica	16	75	Liberia	13
38	Egypt	10	76	Libya	05

N°	Countries	Number of ROs	N°	Countries	Number of ROs
77	Lithuania	08	113	Saint Kitts and Nevis	20
78	Luxembourg	09	114	Saint Vincent and the Grenadines	15
79	Madagascar	01	115	Samoa	01
80	Madeira (Portugal)	01	116	San Marino	07
81	Malaysia	11	117	Saudi Arabia	05
82	Maldives	08	118	Serbia	07
83	Malta	12	119	Seychelles	06
84	Marshal Island	17	120	Sierra Leone	21
85	Mauritius	10	121	Singapore	08
86	Mexico	06	122	Sint Maarten (Kingdom of the Netherlands)	07
87	Monaco	02	123	Slovakia	06
88	Mongolia	18	124	Slovenia	03
89	Montenegro	03	125	Somalia	07
90	Morocco	05	126	South Africa	10
91	Myanmar	07	127	Spain	06
92	Nauru	03	128	Sri Lanka	10
93	Netherlands	07	129	Sudan	01
94	New Zealand	05	130	Sweden	05
95	Nigeria	10	131	Switzerland	07
96	NIS (Norway)	06	132	Thailand	08
97	Niue	12	133	Togo	22
98	Norway	06	134	Trinidad and Tobago	02
99	Oman	09	135	Tunisia	01
100	Pakistan	04	136	Türkiye	08
101	Palau	22	137	Turkmenistan	01
102	Panama	31	138	Tuvalu	12
103	Papua (Nouvelle Guinea)	05	139	Uganda	02
104	Philippines	10	140	Ukraine	03
105	Poland	08	141	United Arab Emirates	13
106	Portugal	08	142	United Kingdom	06
107	Qatar	10	143	United Republic of Tanzania	09
108	Republic of Korea	03	144	United States of America	07
109	Republic of Moldova	17	145	Vanuatu	18
110	Romania	06	146	Vietnam	11
111	Russian Federation	04	147		

Appendix B: List of main documents used for the USCG case study

n°	Authors	Type of Document	Date	Title	Links
01	United States Congress	Public Law	2018	Save Our Seas Act Of 2018	https://www.congress.gov/bill/115th-congress/senate-bill/3508
02	USCG	Code of Federal regulation	Up to date as February 2022	46 CFR: Chapter I – Coast Guard, Department of Homeland Security	https://www.ecfr.gov/current/title-46/chapter-I
03	USCG	Code of Federal Regulation	Dec 1996	46 CFR Parts 8, 31, 71, 91, and 107 Vessel Inspection Alternatives; Classification Procedures; Final Rule	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/Alternate%20Compliance%20Program/fr122796.pdf
04	USCG	Coast Guard Tactics, Techniques, and Procedures (CGTTP 3-72.9A)	2019	Alternate Compliance Program (ACP) Tactics, Techniques, and Procedures (TTP)	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/Guidance/CGTTP_3-72_9A_ACP.pdf
05	USCG	Technical note (MTN NO. 04-03, CH-4)	2021	Technical Support and Oversight of Authorized Classification Societies	https://www.dco.uscg.mil/Portals/9/MS/MTN/MTN.04-03.CH-4.2021.04.06.Technical%20Support%20and%20Oversight%20of%20Authorized%20Classification%20Societies.pdf
06	USCG	Navigation And Vessel Inspection Circular (NVIC) No. 02-95, Ch-3	2018	The Alternate Compliance Program (ACP)	https://www.dco.uscg.mil/Portals/9/OCSN/COE/References/NVICs/NVIC-02-95-CH3.pdf?ver=FAHLfUZMP7SSn1O409zujQ%3D%3D

07	USCG	Commandant Instruction 5200.4a	2019	U.S. Coast Guard Mission Management System	https://media.defense.gov/2020/Jan/28/2002240099/-1/-1/0/CI_5200_4A.pdf
08	USCG	Commandant Change Notice 16000	2016	CH-2 to Marine Safety Manual Volume II	https://www.dco.uscg.mil/Portals/9/OCSN/COE/References/COMDTINSTs/CIM-16000.70-Marine-Insp-Admin.PDF?ver=TSStUMNrR8ZiIcG0aK27XUw%3D%3D
09	USCG	Work Instructions [CVC-WI-003(3)]	2018	USCG Oversight of Safety Management Systems on U.S. Flag Vessels	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC_MMS/CVC-WI-003(series).pdf?ver=UBYVu7aS4xqZYF2dBkucSQ%3d%3d
10	USCG	Work Instructions [CVC-WI-008(1)]	2019	Vertical Contract Audits	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC_MMS/CVC-WI-008(1)_Vertical_Contract_Audits.pdf?ver=2019-07-25-154047-330
11	USCG	Job Aid [CVC-FM-007(2)]	2019	Vertical Contract Auditing Job Aid	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC_MMS/CVC-FM-007(1)_VCA_Job_Aid.pdf?ver=2019-07-25-154046-813
12	USCG and the Department of Transport of Canada	Memorandum of Cooperation	2016	Memorandum of Cooperation between the USCG and the Department of Transport of Canada, Regarding the Management of the Code for Recognized Organizations Oversight Program with	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/Alternate%20Compliance%20Program/MOC_USCG-DOTCanada.pdf

respect to Mutually Recognized Organizations

13	USCG and Directorate for Mobility and Transport of the European Commission	Memorandum of Cooperation	2020	Memorandum of Cooperation between the USCG and the Directorate for Mobility and Transport of the European Commission, Regarding the Management of the Code for Recognized Organizations Oversight Program with respect to Mutually Recognized Organizations	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC4/Memoranda/EC%20MOC.pdf
14	USCG	Report	2017	Flag State Control Annual Report 2017	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC1/AnnualRpt/2017DomesticAnnualReport.pdf
15	USCG	Report	2018	Flag State Control Annual Report 2018	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC1/AnnualRpt/2018DomesticAnnualReport.pdf
16	USCG	Report	2019	Flag State Control Annual Report 2019	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC1/AnnualRpt/2019DomesticAnnualReport.pdf
17	USCG	Report	2020	Flag State Control Annual Report 2020	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC1/AnnualRpt/2020%20Flag%20

					State%20Control%20Annual%20Report.pdf?ver=KjlIvJcwgB2bafzy6HKgCw%3d%3d
18	USCG	Report	2021	Flag State Control Annual Report 2021	https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC1/AnnualRpt/2021%20Flag%20State%20Control%20Domestic%20Annual%20Report.pdf
19	United States Government Accountability Office	Report to Congressional Committees	2022	Enhancements Needed to Strengthen Marine Inspection Workforce Planning Efforts	https://www.gao.gov/assets/gao-22-104465.pdf
20	United States National Academy of Sciences	Report	2022	Strengthening U.S. Coast Guard Oversight and Support of Recognized Organizations: The Case of the Alternative Compliance Program (2021)	https://nap.nationalacademies.org/catalog/26450/strengthening-us-coast-guard-oversight-and-support-of-recognized-organizations-the-case-of-the-alternative-compliance-program

Appendix D: Question Guide for In-depth Interviews

Title of the research: Oversight of Recognized Organizations: Understanding Flag States Practices.

Purpose of the research: This research focuses on the oversight of RO performance to help countries, international organizations, and ROs in their role of providing safety in the shipping industry. It aims to propose best practices that can be used to oversee RO in their capacities of fulfilling their responsibilities on behalf of flag States. Further, this research explores how flag states can efficiently use their maritime administration's limited resources to properly supervise the services provided by their ROs.

Your participation: You are invited to participate in this interview which aims to identify best practices that can be shared with other flag States in the oversight of Recognized Organizations. Your responses will be treated in the strictest confidence and anonymized. Your participation is completely voluntary and without any payment. You are welcome to withdraw from the research at any time, even after answering the questions. Thank you for your participation.

Researcher:

Name:

Contact:

Interviewee:

Name (Optional):

Nationality:

Organization:

Occupation:

Contact:

Email:

Number of years in the maritime administration:

Number of years in the RO's oversight department:

1) Flag States maritime administration

- a. How is the Maritime administration organized (structure) to ensure the oversight of ROs?
- b. What is the best way to organize a Maritime Administration to optimize its ROs oversight role?

2) Flag States personnel

- a. How is the personnel selection done?
- b. Is there any need for technical and business understanding of the RO? Do both criteria have the same value?

- c. Is there any specific training for the personnel in charge of the oversight program? Is there any ethical course during the training?
 - d. How many personnel do you have for the ROs oversight?
 - e. Is there any programme for the evaluation of the personnel?
 - f. What are the best practices to improve the performance of your personnel?
- 3) Oversight activities**
- a. What types of oversight activities is your administration conducting?
 - b. Do you have a formal oversight programme (monthly, annual...)? It is communicated to the ROs?
 - c. Do you have any specific report procedures or forms? What is the RO requested to report?
 - d. What are the best activities to ensure an efficient oversight?
- 4) Oversight activities: planning**
- a. Do you have any audit criteria when auditing ROs? What are your most important audit criteria?
 - b. How do you determine the objectives of your oversight activities? Is there any consultation with other stakeholders? If yes, who are those stakeholders?
 - c. How do you communicate with the ROs? Is there any frequency and preferred communication procedures?
 - d. How are your activities funded? Can you think about any other possible type of funding?
 - e. What are the best practices to ensure effective planning?
- 5) Oversight activities: Implementation**
- a. Do you have any high-level audits?
 - b. How do you constitute the audit team? Do the team members have predefined roles and functions?
 - c. Do you communicate the objectives of the oversight activities to the ROs?
 - d. How do you save the record of your oversight activities and for how long?
 - e. What is the best practice to be implemented for a successful oversight programme?
- 6) Oversight activities: Evaluation and improvement**
- a. Is there any external audit or evaluation of the flag State oversight system?
 - b. Do you have any service in charge of complaints and feedback? Is there any deadline to receive complaints?
 - c. To what extent oversight findings made available to other stakeholders?
 - d. Do you have specific data analysis software to analyse the previous reports?
 - e. How do you deal with the follow-up about rectifications of deficiencies? Is there a dedicated service in charge of it?

- f. What is the review, approval, and distribution process?
- g. How do you use the conclusions of previous monitoring activities?
- h. What should be considered to continuously improve the RO's oversight programme?

7) Oversight program and global disruption

- a. What impacts did COVID-19 have on your oversight programme?
- b. What was the most important disruption?
- c. How did you make up for it?

8) Others

- a. Do you have any combined oversight programs with other countries? What do you think about it?
- b. What do you think about the International Quality Assessment Review Body (IQARB) system? Is it enough?
- c. What is the best oversight activity to ensure that ROs are fulfilling the delegated task?
- d. What is the most efficient oversight activity to ensure that ROs are fulfilling their activities?

Appendix E: Questions of Semi-structured interviews

Interview Instrument

Title of the research: Oversight of Recognized Organizations: Understanding Flag States Practices

Purpose of the research: This research focuses on the oversight of RO performance to help countries, international organizations, and ROs in their role of providing safety in the shipping industry. It aims to propose best practices that can be used to oversee RO in their capacities of fulfilling their responsibilities on behalf of flag States. Further, this research explores how flag states can efficiently use their maritime administration's limited resources to properly supervise the services provided by their ROs.

Your participation: You are invited to participate in this interview which aims to identify best practices that can be shared with other flag States in the oversight of Recognized Organizations. Your responses will be treated in the strictest confidence and anonymized. Your participation is completely voluntary and without any payment. You are welcome to withdraw from the research at any time, even after answering the questions. Thank you for your participation.

Researcher:

Name:

Contact:

Interviewee:

Name:

Nationality:

Organization:

Occupation:

Contact:

Email:

Number of years in the maritime administration:

Number of years in the RO's oversight department:

1) Flag States maritime administration

How do you evaluate the result of the survey?

2) Flag States personnel

How do you assess the views of the responders about the most important requirements for the flag States personnel in charge of ROs oversight?

3) Oversight Activities: Planning and Implementation

Are the results concurring with your experiences?

4) Oversight Activities: Evaluation and Improvement

What is your assessment of this survey result?

5) Oversight programme: Global Disruption, combined Oversight Programme and IQARB

How do you assess the views of the responders about the disruption caused by the COVID-19, the relevance of combined oversight programme, and the International Quality Assessment Review Body?

Appendix F: Interviewee Details

In-depth interviews

Number of participants: 03 USCG personnel

INT 1: 12 years of services (mid-level management)

INT 2: 20 years of services (top level management)

INT 3: 25 years (top level management)

Semi-structured interviews

INT 4: 20 years of service (RO personnel from the top-level management)

INT 5: 22 years of service (flag State administration personnel from the top-level management)

INT 6: 26 years of service (maritime consultancy agency personnel from the top-level management)

Appendix G: Survey questionnaire

Questionnaire Instrument

Title of the research: Oversight of Recognized Organizations: Understanding Flag States Practices

Purpose of the research: This research focuses on the oversight of RO performance to help countries and international organizations in their role of providing safety in the shipping industry. It aims to propose best practices that can be used to oversee RO in their capacities of fulfilling their responsibilities on behalf of flag States. Further, this research explores how flag states can efficiently use their maritime administration's limited resources to properly supervise the services provided by their ROs.

Your participation: You are invited to participate in this interview which aims to identify best practices that can be shared with other flag States in the oversight of Recognized Organizations. Your answer will help identify how important are the following aspect in the oversight process. Your responses will be treated in the strictest confidence and anonymized. Your participation is completely voluntary and without any payment. You are welcome to withdraw from the research at any time, even after answering the questions. Thank you for your participation.

Researcher:

Name:

Contact:

Interviewee:

Name (Optional):

Nationality:

Organization:

Occupation:

Contact:

Email:

Number of years in the industry:

Number of years in the RO's oversight department:

1) Please rate to what extent you think the following aspect of the Flag States maritime administration is important to oversee ROs

	Extremely important	Very important	Moderately important	Slightly important	Not important
Q 1.1 The structure of the Maritime administration to ensure the oversight of ROs (dedicated service and personnel)					

Q 1.2 What other aspects related to the organization and structure of the flag States maritime administration do you think are important for effective oversight of ROs? Can you list them from the most important to the less important?

2) Please rate to what extent you think the following aspect related to the Flag States personnel in charge of oversight activities is important to oversee ROs

	Extremely important	Very important	Moderately important	Slightly important	Not important
Q 2.1 The Selection process of the personnel					
Q 2.2 The need for the Maritime administration personnel to have a technical understanding of the ROs					
Q 2.3 The need for the Maritime administration personnel to have a business understanding of the RO					
Q 2.4 The need for specific training					
Q 2.5 The need for an ethical training					
Q 2.6 The number of personnel dedicated to the oversight activities					

Q 2.7 Evaluation programme for the personnel in charge of the oversight programme					
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Q 2.8 Can you choose among the aspects provided from **Q2.1** to **Q2.7** the three most important in your opinion?

Q 2.9 What other aspects related to the flag States personnel in charge of the oversight of the RO do you think are important for an effective oversight? Can you list them?

3) Please rate to what extent you think the following aspect related to the oversight activities is important to oversee ROs

	Extremely important	Very important	Moderately important	Slightly important	Not important
Q 3.1 Audits of RO quality management system					
Q 3.2 Participating in RO activities to certify ships for the flag State fleet					
Q 3.3 Additional inspections by flag States personnel of ships certified by ROs					
Q 3.4 Developing and monitoring RO's key performance indicators					
Q 3.5 Developing and implementing an oversight programme					

Q 3.6 Can you choose among the aspects provided from **Q3.1** to **Q3.5** the three most important in your opinion?

Q 3.7 What other oversight activities do you think are important for effective oversight of ROs by a Flag State? Can you list them?

4) Please rate to what extent you think the following aspect related to oversight activities planning is important to oversee ROs

	Extremely important	Very important	Moderately important	Slightly important	Not important
Q 4.1 Defining audit criteria					
Q 4.2 Establishing objectives of oversight activities					
Q 4.3 Defining clear communication procedures with RO					
Q 4.4 Frequency of communication and report					
Q 4.5 Funding of the oversight programme activities					
Q 4.6 Involving RO in the preparation of the activities					
Q 4.7 Involving other stakeholders in the preparation of the oversight activities					

Q 4.8 Can you choose among the aspects provided from **Q4.1** to **Q4.7** the three most important in your opinion?

Q 4.9 What other aspects related to the planning of the oversight activities do you think are important for effective oversight of ROs by a flag State? Can you list them?

5) Please rate to what extent you think the following aspect related to oversight activities implementation is important to oversee ROs

	Extremely important	Very important	Moderately important	Slightly important	Not important
Q 5.1 Implementing high-level audits					
Q 5.2 Composition of the oversight audit/inspections/surveys team					
Q 5.3 Communication of the objectives to the ROs before the activities					
Q 5.4 Keeping record of the oversight activities					

Q 5.5 Can you choose among the aspects provided from **Q5.1** to **Q2.4** the three most important in your opinion?

Q 5.6 What other aspects related to the implementation of oversight activities do you think are important for effective oversight of ROs by a flag State? Can you list them?

6) Please rate to what extent you think the following aspect related to the evaluation and improvement of oversight activities is important to oversee ROs

	Extremely important	Very important	Moderately important	Slightly important	Not important
Q 6.1 Implementing external audit or evaluation of the flag State oversight system					
Q 6.2 Establishing a complaint and feedback procedure					
Q 6.3 Use of software to analyse previous oversight findings					
Q 6.4 Procedure to deal with the follow up about rectifications of deficiencies revealed by the oversight activities					
Q 6.5 Approval process of the final report					
Q 6.6 Incorporation of the conclusions of previous monitoring activities into new activities					

Q 6.7 Can you choose among the aspects provided from **Q6.1** to **Q6.6** the three most important in your opinion?

Q 6.8 What other aspects related to the evaluation and improvement of oversight activities do you think are important for effective oversight of ROs by a flag State? Can you list them?

7) Please rate to what extent you think the following aspects are important to oversee ROs

	Extremely important	Very important	Moderately important	Slightly important	Not important
Q 7.1 Implementation of combined oversight programs with other countries					
Q 7.2 Relevance of the International Quality Assessment Review Body (IQARB) system					
Q 7.3 The impact of COVID 19 on the effectiveness					

Q 7.4 What other aspects can you think of as important for effective oversight of ROs by a flag State? Can you list them?

Appendix H: WMU Research Ethics Committee Approval

REC DECISION # REC-22-28(M) Inbox x



Email, PhD <PhD@wmu.se> (sent by cef@wmu.se)
to me, Chongju ▾

Thu, Jun 2, 5:43 PM ☆ ↶ ⋮

Dear Choilio Sanogo,

I am pleased to let you know that the members of the WMU Research Ethics Committee (REC) have now **approved** the research related documents that you submitted to this office on 1st and 2nd June 2022, concerning your research study involving human participation.

You are now free to start your data collection work in consultation with your supervisor.

With kind regards,

Carla Fischer
REC Secretary
Faculty Support Officer
Research Projects and Doctoral Programs
World Maritime University

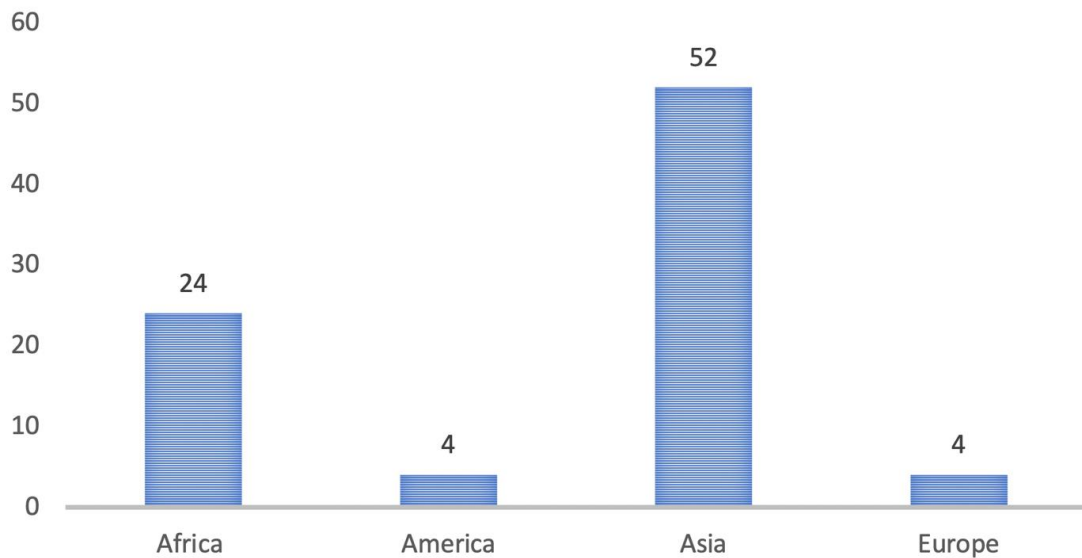
Malmö, Sweden
Tel: +46 40 35 63 91
Fax: +46 40 12 84 42
E-mail: phd@wmu.se

Appendix I: Details about the Participants in the Survey

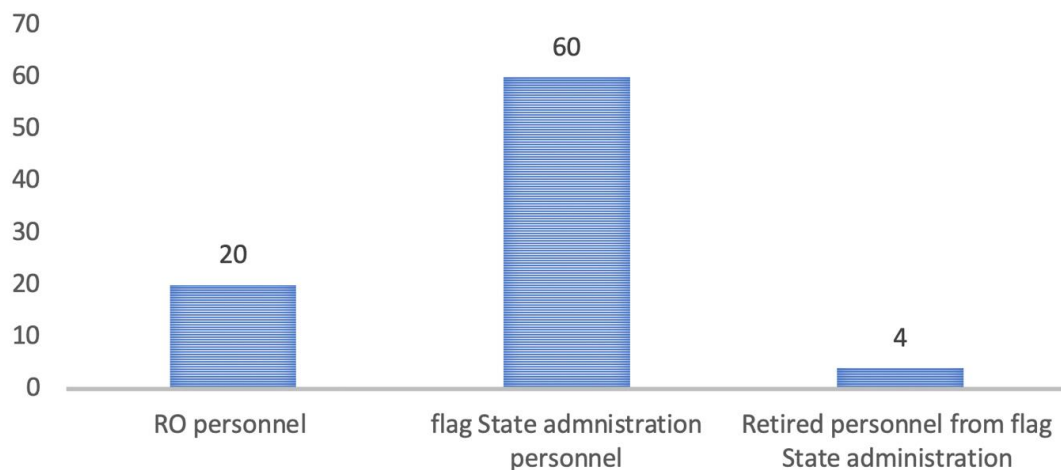
Total number of participants: 97

Valid answers: 84 from 15 countries

PARTICIPANTS PER CONTINENT



PARTICIPANTS PER PROFESSIONAL BACKGROUND



Appendix J: Delegation Status of ROs authorized by the USCG

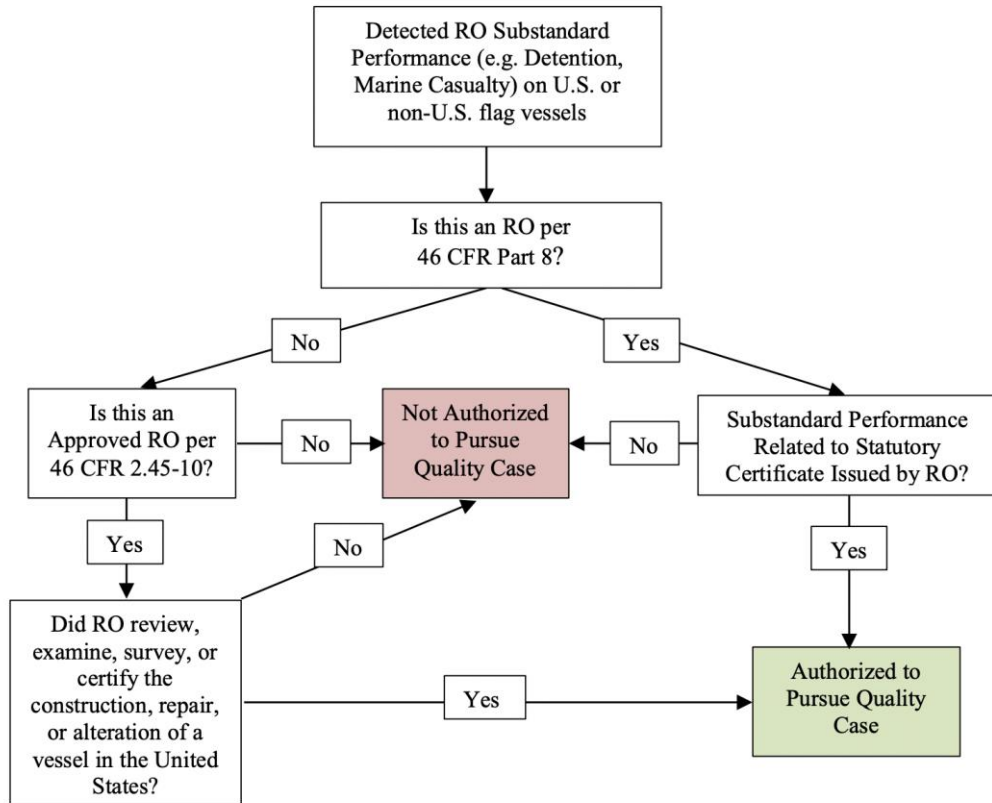
Class Society Status	ABS	BV	ClassNK	DNV	LR	RINA	IRCLASS
Recognized (46 CFR part 8, subpart B)	*	*	*	*	*	*	*
Alternate Compliance Program (ACP) (46 CFR part 8, subpart D)	* +		* +	* +	* +		
Classification Society Activities (46 CFR part 2, subpart 2.45)	*	*	*	*	*	*	*
Authorizations	ABS	BV	ClassNK	DNV	LR	RINA	IRCLASS
International Convention on Load Lines, 1966, as modified by the 1988 Protocol, as amended (ICLL66/88)							
International Load Line Certificate (LL Protocol)	*	*	*	*	*	*	*
Tonnage							
ITC (46 CFR 69, subpart B)	*	*	*	*	*	*	*
U.S. Regulatory (46 CFR 69, subparts C & D)	*	*	*	*	*	*	*
International Convention for the Safety of Life at Sea, 1974, and Protocols of 1978 & 1988, as amended (SOLAS 74/78)							
Cargo Ship Safety Construction Certificate (SOLAS)	*	*	*	*	*	*	*
Cargo Ship Safety Equipment Certificate (SOLAS)	*	*	*	*	*	*	*
Passenger Ship Safety Certificate (SOLAS)	*		*	*		*	
Document of Compliance for Ships Carrying Dangerous Goods (IMSBC Code) (SOLAS regulation II-2/19)	*	*	*	*	*	*	*
Cargo Securing Manual Approval (33 CFR 97.300)	*	*	*	*	*	*	*
International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk (IBC Code)	*	*	*	*	*	*	*
International Certificate of Fitness for the Carriage of Liquefied Gasses in Bulk (IGC Code)	*	*	*	*	*	*	*
Document of Compliance Certificate and Interim Certificate (ISM Code)	*		*	*		*	*
Safety Management Certificate and Interim Certificate (ISM Code)	*		*	*		*	*
Authorize service providers for lifesaving appliances (LSA) according to MSC.402(96)	*		*	*	*		
Conduct periodic audits on authorized service providers for LSA according to MSC.402(96)	*		*	*	*		
International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978, as amended (MARPOL 73/78)							
International Oil Pollution Prevention Certificate (MARPOL 73/78, Annex I)	*	*	*	*	*	*	*
International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (NLS Certificate) (MARPOL 73/78 Annex II)	*	*	*	*	*	*	*
Verification of Compliance with MARPOL 73/78 Annex III (Packaged Harmful Substances)	*	*	*	*	*	*	*
International Sewage Pollution Prevention Statement of Voluntary Compliance (SOVC) (MARPOL 73/78 Annex IV)	*	*	*	*	*	*	*
Verification of Compliance with MARPOL 73/78 Annex V (Garbage)	*	*	*	*	*	*	*
International Energy Efficiency Certificate (IEE) (MARPOL 73/78, Annex VI)	*	*	*	*	*	*	*
Verification of Compliance of Ship Fuel Oil Consumption Data (MARPOL 73/78, Annex VI)	*	*	*	*	*	*	*
International Air Pollution Prevention Certificate (MARPOL 73/78, Annex VI)	*	*	*	*	*	*	*
International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS)							
International Anti-Fouling System Certificate (IAFS)	*	*	*	*	*	*	*
Other Conventions, Codes, and Guidelines							
Polar Ship Certificate according to the International Code for Ships Operating in Polar Waters (Polar Code)	*	*	*	*		*	
Mobile Offshore Drilling Unit Safety Certificate (MODU Code)	*	*			*		*
Certificate of Fitness for the Transport and Handling of Limited Amounts of Hazardous and Noxious Liquid Substances in Bulk on Offshore Support Vessels (resolution A.673(16), as amended)	*	*		*			
Statement of Voluntary Compliance (SOVC) with Ballast Water Management Convention	*	*	*	*	*	*	*
Document of Compliance for Offshore Supply Vessel according to IMO Resolution MSC.235(82)	*	*		*			
Cargo Gear Certificates and Registers (46 CFR Parts 31.10-16 & 91.25-25)	*	*	*	*	*	*	*

NOTES: * = authorized; + = ACP vessels only. Classification Society Abbreviations: ABS = American Bureau of Shipping; BV = Bureau Veritas; ClassNK = Nippon Kaiji Kyokai; DNV = Det Norske Veritas; LR = Lloyd's Register; IRCLASS = Indian Register of Shipping; RINA (created by the Registro Italiano Navale).

Source: USCG (2021). Status of Classification Society Recognition, ACP Participation, and Authorizations Delegated by the U.S. Coast Guard.

<https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC4/ClassSocietyAuths.pdf>.

Appendix K: Flow Diagram for Quality Case Applicability



Note: extracted from USCG. (2022). Request for Recognized Organization (RO) Internal Quality Management System (QMS) Review – “Quality Case.” [https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC_MMS/CVC-WI-005\(3\)%20Request%20for%20RO%20Internal%20QMS%20Review%20%20Quality%20Case.pdf](https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC_MMS/CVC-WI-005(3)%20Request%20for%20RO%20Internal%20QMS%20Review%20%20Quality%20Case.pdf).

Appendix L: Main Changes in the USCG oversight framework after the El Faro accident

Organizational Structure	Personnel and training	Planification and implementation	Evaluation and Improvement
<ul style="list-style-type: none"> –Creation the Flag State Control Division (CVC-4) –Creation of the office of third-party organization coordinators –Updates or new guidelines such as the Navigation and Vessel Inspection Circular (NVIC N° 02-95) which defines the role of all stakeholders of the oversight framework 	<ul style="list-style-type: none"> –Hire third-party organization coordinators –Hire new inspectors –Update of Marine inspectors training –Advanced Inspector training with focus on audits skills 	<ul style="list-style-type: none"> –Review of field inspection activities by the CVC-4 –Organization of Annual RO’s summit –Establishment of Quality cases –Establishment Vertical contract audits –Request for Quarterly reports from ROs –Organization of annual inspectors’ conferences –Unique supplement for all ROs 	<ul style="list-style-type: none"> –Use of mobile application to access vessel records in the MISLE –Creation of Management System Oversight Module in MISLE –Annual Flag State Control report –Creation of the Fleet risk index –Development of ROs KPI

Note: adapted from the National Academies of Sciences, Engineering, and Medicine (NASEM). (2021). Strengthening U.S. Coast Guard Oversight and Support of Recognized Organizations: The Case of the Alternative Compliance Program. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26450>.