



한국해양수산개발원
KOREA MARITIME INSTITUTE

KMI - WMU Seminar

IMO Member State Auditing Scheme: Current Practices and Future Challenges

16 June 2016, World Maritime University, Malmö, Sweden



MESSAGE FROM THE PRESIDENT OF WORLD MARITIME UNIVERSITY



It is my pleasure to welcome you as President of World Maritime University (WMU) to this event that is so significant to us at WMU in many ways. First of all – this event is the first joint activity with a new strategic partner and friend – the Korean Maritime Institute (KMI), a leading maritime research institute under the National Research Council for Economics, Humanities and Social Sciences in the Republic of Korea. It is exciting to start a fruitful relationship with such a strong partner and internationally recognized leader in its field. I am very pleased to see that we are about to formalize our relationship and I look forward to many more joint activities in this respect.

I very much welcome the initiative of KMI to work closely with WMU, as this helps to further implement our Strategic Plan 2016 – 2019 adopted during the last session of the WMU Board of Governors in May earlier this year. Strategic Direction 2 requires us to strengthen our capabilities in the academic deliveries related to Maritime Policy and through cooperation with KMI we are taking decisive steps in this direction.

Furthermore, I would like to highlight the topic of this seminar – the IMO Member State Auditing Scheme (IMSAS) – a major achievement of the IMO in recent years and I am happy that we have the chance to discuss the auditing scheme with such an experienced group of speakers. Performance of member States of IMO in their capacity as flag, port or coastal States is typically characterized by effective implementation and enforcement of IMO standards. This is regulated in the United Nations Convention on the Law of the Sea (UNCLOS). However, it was also discussed in IMO over many years. What started with guidelines on the authorization of recognized organizations in the early 1990s led to a self-assessment of member States a few years later and became IMSAS. Although it was initially a voluntary scheme, it was made mandatory in 2013 and 2014 and entered into force 01 January 2016.

The auditing scheme is probably the most powerful tool to help member States review and assess their own performance in respect to their obligations under the international instruments agreed in IMO. I note with pleasure that crucial measures to adopt this scheme were initiated by the former IMO Flag State Implementation Sub-Committee during the period when it was chaired by the current IMO Secretary General and WMU Chancellor Mr Kitack Lim.

This allows me to build a bridge between the auditing scheme and WMU as it shows what difference our graduates can make in their daily work. We at WMU are delighted when we see the success that our graduates have in their endeavours to work for cleaner oceans and safer ships throughout the world and we are extremely proud that one of our graduates – Mr. Kitack Lim – was elected to work as Secretary General of IMO. This is also a significant recognition of our work at WMU. At the same time, I would like to use this opportunity to thank the Government of the Republic of Korea for its long standing commitment and support of WMU, which has helped to strengthen the University and its global outreach.

With this in mind, I would once more like to welcome all participants to this seminar and I am looking forward to interesting presentations and fruitful discussions.

Dr Cleopatra Doumbia-Henry
President of WMU

MESSAGE FROM THE PRESIDENT OF KOREA MARITIME INSTITUTE



The first WMU-KMI Seminar is organized by the institutes: that is, the World Maritime University (WMU), a postgraduate maritime university founded by the International Maritime Organization (IMO), a specialized agency of the United Nations, and the Korea Maritime Institute (KMI), a government-sponsored research institute under the National Research Council for Economics, Humanities and Social Sciences in the Republic of Korea. These two regionally and globally recognized organizations in maritime affairs and policy are considered well-matched collaborators having joining forces and leading the world maritime communities through scientific, practice-minded and policy-driven researches.

An initial idea for this joint seminar goes back to October 2015 when a large group of senior delegates from Korea, including the Minister of the Ministry of Oceans and Fisheries, visited to WMU. The Minister indicated that the Korean Government would continue to support WMU activities in a direct and indirect manner; the establishment of Korean Professorial Chair is a recent example. The Vice-President of KMI was among the delegates and expressed that KMI would like to make a joint-effort with WMU for an even greater impact on the world's maritime affairs and policy sphere. A number of potential trajectories have been since then under consideration between the two institutes and the recent visit by the WMU President to KMI in May 2016 further catalyzed such joint endeavors.

A working group was established and has since worked closely with each other to exchange views and put forward the proposal of a joint Seminar. The current joint seminar was subsequently suggested to be an inaugural event to mark forthcoming long-term collaborative efforts by the two organizations. The theme proposed for the Seminar is "IMO Auditing Schemes: Current Practices and Future Challenges" as the working group considers it imperatively and timely as per the quality and safety aspects of the maritime and shipping industry.

As President of KMI, I am very glad to have an opportunity to introduce my Institute and staff members via this occasion. KMI was founded in 1984 and has been engaged with a series of major initiatives in maritime, fisheries, shipping and port developments on a national and regional scale, having accumulated knowledge and intellectual capacities in such areas over the past three decades. KMI, as one of national research and development institutes in Korea, will present sensible policy suggestions through systematic research and analyses. It is committed to playing an important role in national economic development as well as national policy establishment via critical examination of international pattern and trends as per necessities and demands from private and public stakeholders in the maritime communities. KMI has been a think-tank for developing national policies on maritime affairs and fisheries in a form of basic- and demand-based research and consultancy. In addition, we have collected, analyzed and distributed data and information in regard of world marine affairs, fisheries, shipping and port industries to interested stakeholders. By doing so, KMI aims to develop itself into a world-class research institute, thereby promoting Korea's status in the international community. Those of you who have an interest in knowing more about my Institute, I would personally extend my warm invitation to them and look forward to welcoming you at KMI in near future.

Having fully supported this joint seminar between WMU and KMI, I do surely believe that this event would be a milestone for each side of us as both organizations are a keen driver in research, education and training in maritime affairs and policy.

Dr Sung-Gwi Kim
President of KMI

ABOUT WMU

WMU is a postgraduate university based in Malmö, Sweden, providing a unique service to the global community.

Transforming our World: The UN 2030 Agenda for Sustainable Development

WMU is committed to contribute to the implementation of Goal 4 of the UN's 2030 Agenda for Sustainable Development: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". Shipping is indispensable to world trade, carrying over 90% of it. WMU educates, trains and conducts research to support sustainable shipping on clean oceans.

WMU at a Glance

WMU was established in 1983 by the International Maritime Organization (IMO), a specialized agency of the United Nations. Its mission is to be the world centre of excellence in postgraduate maritime and oceans education, professional training and research, while building global capacity and promoting sustainable development. WMU graduates are specially equipped to implement effectively international maritime and oceans treaties.

WMU's Academic Engagement

WMU's 4,116 graduates to date come from 166 countries. Many have graduated from the Malmö-based Master of Science programme, and have specialized in one of seven areas:

- Maritime Education and Training (for the faculty of maritime training institutions)
- Maritime Safety and Environmental Protection
- Maritime Energy Management
- Maritime Law & Policy
- Ocean Sustainability, Governance & Management
- Port Management
- Shipping Management & Logistics

WMU continues to expand its programmes to ensure that it continues to meet its mandate to support one of the most globalized sectors in a rapidly changing maritime world. WMU also offers M.Sc. programmes in China, has a growing Ph.D. programme in Malmö, an LLM and Postgraduate Diplomas by distance learning, a broad range of Professional Development Courses and an MPhil degree offered jointly with the IMO International Maritime Law Institute in Malta. WMU also has a strong research portfolio, in areas such as mitigating invasive species in the Arctic, Risk Assessment, Maritime Spatial Planning, and e-Navigation.

WMU's Graduates

WMU graduates hold senior positions in their countries, including as government ministers, directors of maritime administration, commandants of coast guards and naval organizations, managing shipping companies and ports, and as directors of national maritime academies. They wield significant influence in their countries and in today's maritime, ports and logistics sectors. The current Secretary-General of IMO, Mr. Kitack Lim, is a WMU alumnus (M.Sc. 1991). WMU students are proud to be ambassadors of their homelands while studying in Malmö. After graduation, WMU alumni are active ambassadors for Sweden.

The WMU Environment

The University offers a diverse and international environment, providing an extraordinary network of faculty, visiting professors, guest lecturers and students from around 45 different countries each year. The majority of the students live together in the university-provided residence that offers a unique forum for sharing maritime knowledge as well as cultural understanding. WMU moved to a spectacular new home in the heart of Malmö in 2015, made available by the City of Malmö, that provides purpose-built accommodation to support teaching and research.

WMU offers stakeholders unrivalled access to a global network of experts, knowledge and capacity-building. As part of the United Nations system, WMU is the embodiment of the principle that education is the engine of economic growth, promotes social justice and inclusive societies.

ABOUT KMI

A Think Tank for Policy Development in Maritime Affairs, Fisheries and Ocean

A World-Class Research Institute in Maritime Affairs and Fisheries

Over the last thirty years since its foundation in 1984, the Korea Maritime Institute (KMI) has undertaken a number of initiatives in maritime, fisheries, shipping and port development, having created value-added knowledge and intellectual services. The Korean economies have been well recognized to pass through a series of developments within a remarkably short period of time. It becomes now a common knowledge that maritime industries, in particular, shipping, ports and shipbuilding sectors, have played a pivotal role in the country's economic growth. KMI has been always with the industrial sectors as an opinion leader and an idea creator for policy-development and -making in the associated industries. Generally, the maritime industry has a series of interlinked sub-sectors that include such primary, secondary and tertiary industries as shipping, shipbuilding, ports, fisheries, fishing villages, marine leisure, waterfront and tourism, offshore plants and marine resources. It has been recently observed that new sectors are emerging with great possibilities: the sectors, for instance, being marine resources and marine energy. In particular, marine and fisheries sectors are regarded as an exemplar industry of so-called creative economies since they could individually as well as collectively generate value adding and sustaining businesses from innovative ideas and concepts. KMI, as a research institute specialized in maritime affairs and fisheries, has made an endeavor of producing a fact-based and practice-oriented policy through systematic analyses and proactive interaction with stakeholders in the industry. KMI projects itself over the years to come that all researchers and research works in the Institute ought to have an impact on the world maritime industry and economies in a way or another. KMI keeps working hard with a variety of stakeholders in the industry on a local, regional and global level, so that we could be considered as a knowledge generating and opinion leading research organization in Korea as well as in the world.

KMI Driving Towards 'The Maritime Civilization'

Since its foundation, KMI has committed itself to conducting a number of studies on the value of maritime and ocean and its implications for human beings; as a consequent of those experiences, KMI helps to initiate the Fourth Wave of Civilization, named The Maritime Civilization. In doing so, KMI will lead the development of maritime and fisheries related policies as an effort to move on towards a creative economy in the sea.

The Organizational Structure

The Institute is composed of the following divisions:

- Maritime Industry and Safety Research
- Marine Policy Research
- Port Policy Research
- Strategy Research
- Planning and Coordination (with KMI China Research Center as a sub-division)
- Fisheries Policy Research (with FTA Implementation Support Center as a sub-division)
- Ocean Academy

The Function and Role

- Being a think tank for developing national policies on marine affairs and fisheries
- Conducting researches and consultancies on marine affairs, fisheries, shipping and port related policies at home and abroad
- Collecting, analyzing and disseminating information on marine affairs, fisheries, shipping and port industries in Korea and other countries
- Collaborating and sharing information with industries, academics, research institutes and government agencies in the world

KMI helps Korea and international communities to create new growth engines through maritime and fisheries development. We hope to further grow by linking Eurasia, the Pacific Ocean and beyond. All researchers and staff at KMI will be devoted to fulfilling their role as a nation's policy-developing research institute, upholding universal human values, and assisting underdeveloped nations as Korea being a G20 member state. We will keep making a substantial effort towards reinventing ourselves as a leading research institute in the world maritime and ocean communities.



PRESENTERS

Mr Lawrence BRACHUE

Director, Member State Audit and Implementation Support, IMO

Mr Joosung PARK

General Manager, Korean Register

Mr Hemming HINDBORG

Director, DMA, Denmark

Mr Sok-Hun KIM

Deputy Director, Ministry of Oceans and Fisheries

Mr John J. HANNON

Programme Manager and Director, US Flag and Military Sealift Vessel Inspection Policy, US Coast Guard

Dr Han-Seon PARK

Research Fellow, Korea Maritime Institute

Dr Christine BERG

Head of Unit, Maritime Safety, DG MOVE, European Commission

MODERATORS

Dr Dong-Woo HA

Chaired Research Fellow, Korea Maritime Institute

Dr Daniel Seong-Hyeok MOON

Professor & INMARSAT Chair, Head of Shipping Management & Logistics, and Port Management, World Maritime University

Dr Jens-Uwe SCHRÖDER-HINRICHS

Professor & Nippon Foundation Chair, Head, Maritime Safety and Environmental Administration, World Maritime University

Dr Dong-Wook SONG

Professor & Republic of Korea Chair, World Maritime University



PROGRAMME OVERVIEW

Time	Agenda	Venue
10:00-11:30	SESSION 1 WMU President Dr. Cleopatra DOUMBIA-HENRY KMI President Dr. Sung-Gwi KIM Speaker 1: Lawrence BARCHUE Speaker 2: Joosung PARK Moderator: Dong-Wook SONG	Sasakawa Auditorium
11:30-12:00	<i>Refreshment Break</i>	<i>World Bistro</i>
12:00-13:00	SESSION 2 Speaker 3: Hemming HINDBORG Speaker 4: Sok-Hun KIM Moderator: Dong-Woo HA	Sasakawa Auditorium
13:00-14:30	<i>Lunch</i>	<i>Årstederna (by invitation only)</i>
14:30-16:00	SESSION 3 Speaker 5: John HANNON Speaker 6: Han-Seon PARK Speaker 7: Christine BERG Moderator: Daniel Seong-Hyeok MOON	Sasakawa Auditorium
16:00-16:30	<i>Refreshment Break</i>	<i>World Bistro</i>
16:30-17:30	Panel Discussion (and Q&As) Moderator: Jens-Uwe SCHRÖDER-HINRICHS	Sasakawa Auditorium
17:30	Closing Remarks Moderator: Jens-Uwe SCHRÖDER-HINRICHS	Sasakawa Auditorium





SESSION

I

10:00-11:30

Sasakawa Auditorium

**WMU President
Dr Cleopatra DOUMBIA-HENRY**

**KMI President
Dr Sung-Gwi KIM**

**Speaker 1
Lawrence BARCHUE**

**Speaker 2
Joosung PARK**

**Moderator
Dong-Wook SONG**

SESSION I

10:00-11:30

Sasakawa Auditorium

LAWRENCE BARCHUE

Director, Member State Audit and Implementation Support, IMO



M.Sc. Maritime Education and Training – Engineering, World Maritime University

B.Sc. (Hons), Marine Engineering, Maine Maritime Academy

Mr Lawrence Dehniah Barchue, Sr. graduated in 1982 from Maine Maritime Academy, Castine, Maine, USA with a B.Sc. (Honours) in marine engineering and a minor in marine industrial management. In 1991, he obtained his M.Sc. in maritime education and training (engineering) from the World Maritime University.

He sailed as engineer officer and obtained his Chief Engineer's license. He was a lecturer at the Marine Training Institute in Liberia and an advisor on international affairs to the Liberian Seaman, Ports and General Workers Union.

From 1992 to February 2002, he served as Deputy Permanent Representative of the Republic of Liberia to the International Maritime Organization (IMO) and Counsellor (Maritime Affairs), Embassy of Liberia in London. He represented Liberia at various meetings of the IMO, including the Assembly, Council, Committees, Sub-Committees, and Diplomatic Conferences, as well as the International Mobile Satellite Organization (Inmarsat), the International Labour Organization and International Telecommunications Union on matters relating to shipping

He served as Chairman of the Facilitation Committee of IMO from 1996 to 2002 and has chaired a number of working groups at meetings convened by intergovernmental organizations.

In March 2002, he joined the Secretariat of the International Maritime Organization and has served in a number of capacities as follows:

- Head, Technical Cooperation Implementation and Project Management Section of the Maritime Safety Division (March 2002 to December 2003)
- Deputy Director/Head (January 2004 to June 2010) and Senior Deputy Director (July 2010 to December 2011), Member State Audit and Internal Oversight, Office of the Secretary-General
- Head, Department for Member State Audit and Implementation Support, Maritime Safety Division (January 2012 to August 2014).
- Director, Department for Member State Audit and Implementation Support (September 2014 to present).

Mr Barchue has served as the focal point on the IMO Secretariat for the development and implementation of the Audit Scheme since its inception.

IMO MEMBER STATE AUDIT SCHEME - CURRENT PRACTICES AND FUTURE CHALLENGES -

Lawrence D. Barchue Sr.
Director,
Department for Member State Audit
and Implementation

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AREAS TO BE COVERED

- **Experiences**
 - Member States
 - Audits/Auditors
- **Lessons Learned**
- **Challenges**

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EXPERIENCE WITH MEMBER STATES UNDER VIMSAS

- Under the voluntary scheme, Member States chose to be audited by IMO so the conduct of the audit was totally dependent on them.
- There were fewer audits (overall average 10 per year) so there was a pool of auditors to choose from that was sufficient.
- Follow-up audits were not possible.
- Technical assistance could be requested well in advance of volunteering for the audit (the State could prepare itself prior to volunteering).

AUDITS AND AUDITORS UNDER VIMSAS

- Planning for audits were a little more complex as cost played a major part in the process.
- Drafting of reports was cumbersome for auditors and standardization and format took up lot of time for auditors and the Secretariat.
- Auditors were inexperienced in Member State audits.
- Maintaining consistency across audits was very difficult.

LESSONS LEARNED - AUDIT ANALYSIS

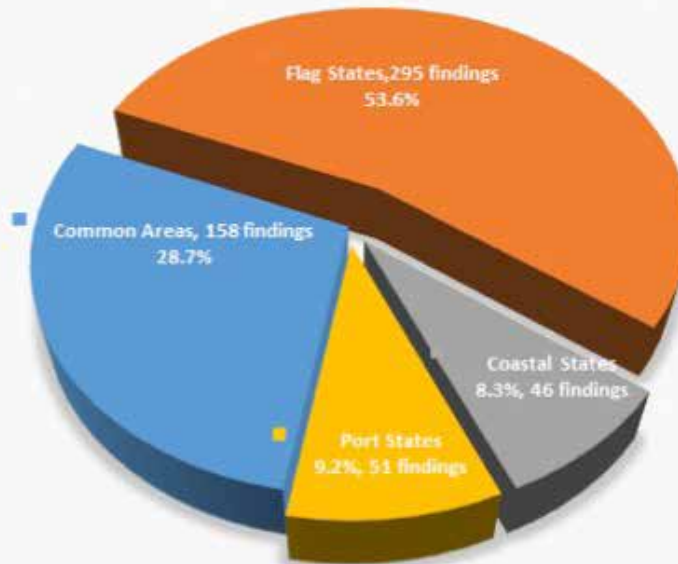
- Review of the consolidated audit summary reports
- Study:
 - Common areas
 - Flag States
 - Coastal States
 - Port States
 - Analysis per Conventions
 - Major areas of concern
 - Root causes

Review of the consolidated audit summary reports

- MSC and MEPC requested FSI Sub-Committee to develop a methodology for analysis of consolidated audit summary reports (CASRs)
- Preliminary study into the methodology for analysis of CASRs contained in document FSI 18/14 and first review of three CASRs available in document FSI 18/INF.7
- Study presented here contained in document **III/1/9** and review of 59 audits available in document **III/1/INF.23**
- The final analysis of the 75 audits carried out under VIMSAS will be considered by III 3 in July (documents **III 3/7** and **III 3/INF.9**)

Analysis of the percentage and numbers of findings according to the parts of the Code

59 Audits - 52 Member States, equating to about 31% of the Membership of the Organization,
2 Associate Members and 5 dependant territories

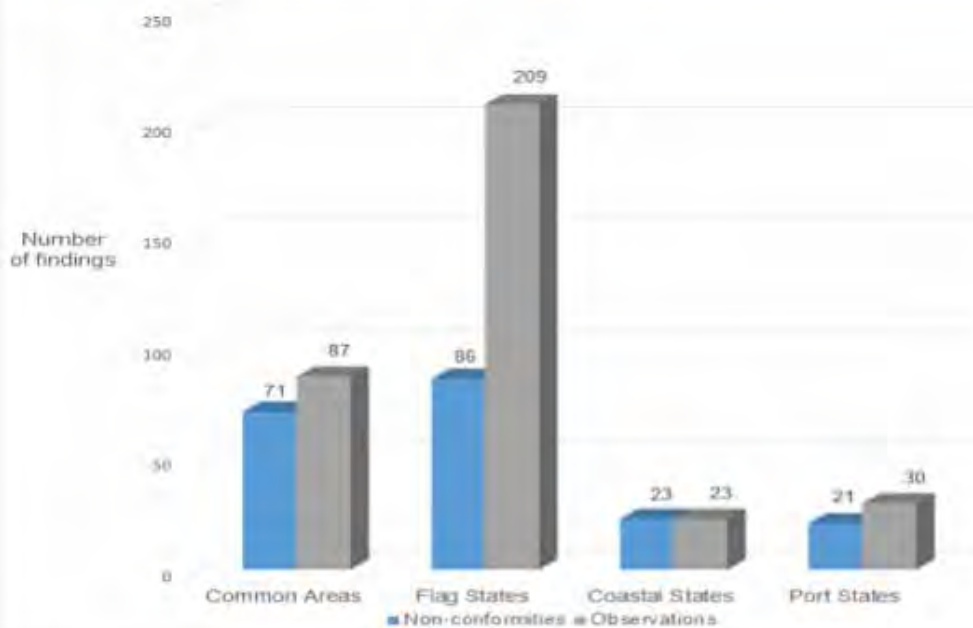


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7



Analysis of non-conformities and observations according to the parts of the Code

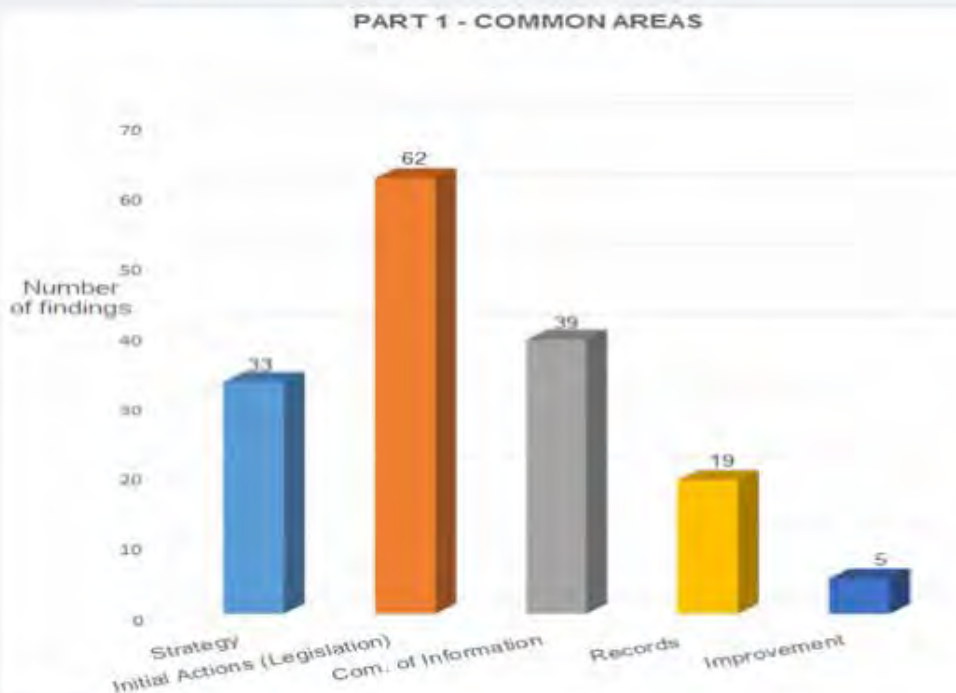


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8



Number of findings under part 1 of the Code – Common Areas

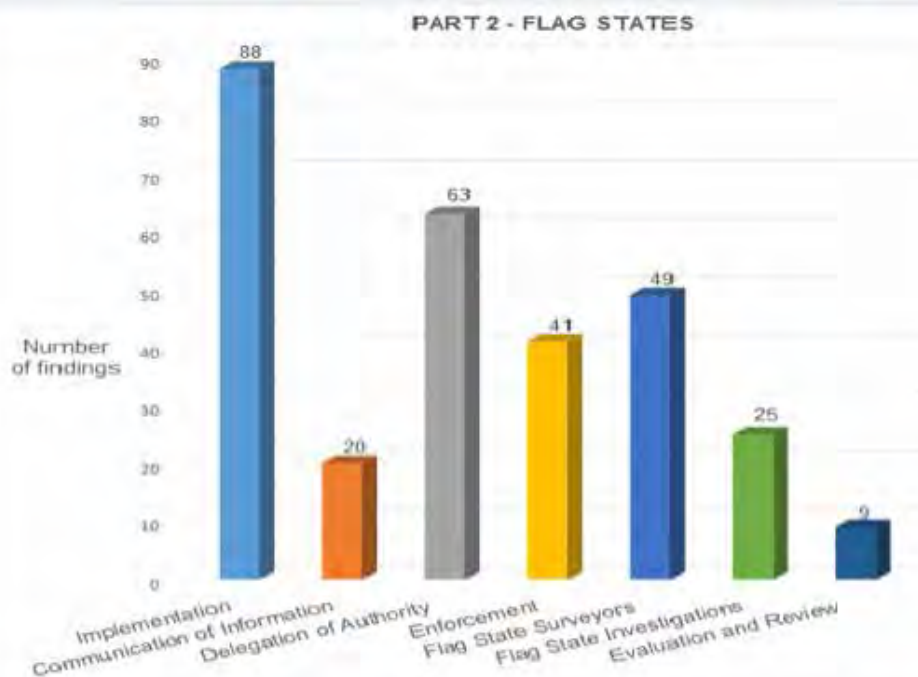


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Number of findings under part 2 of the Code – Flag States

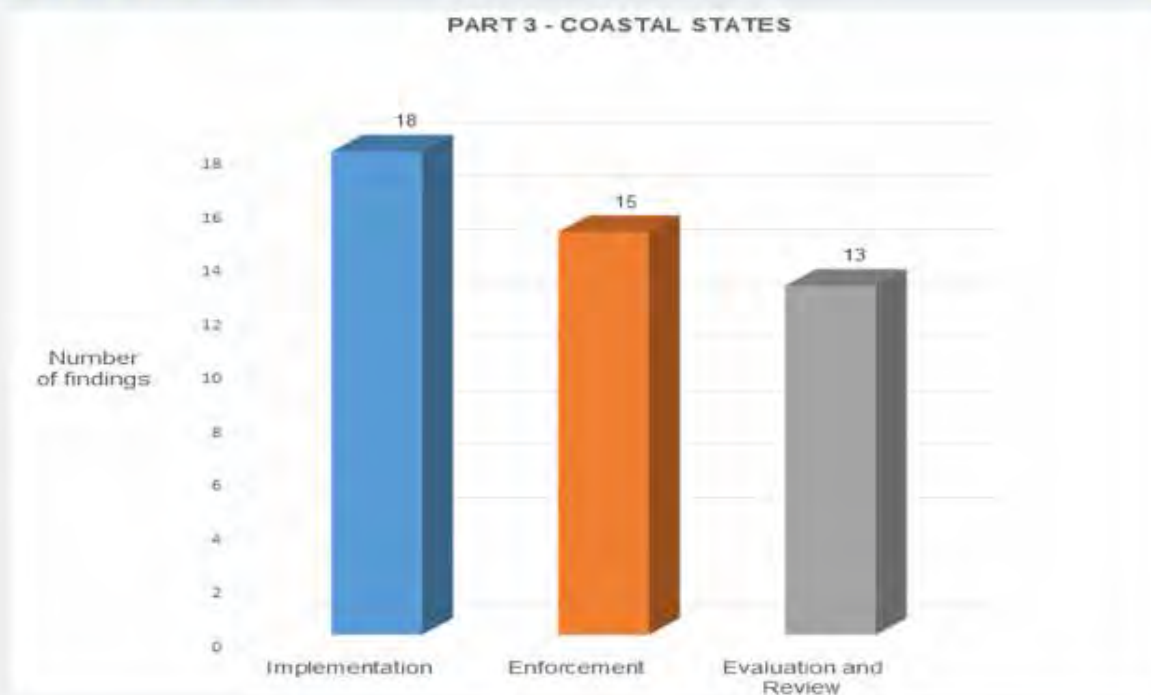


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10



Number of findings under part 3 of the Code – Coastal States

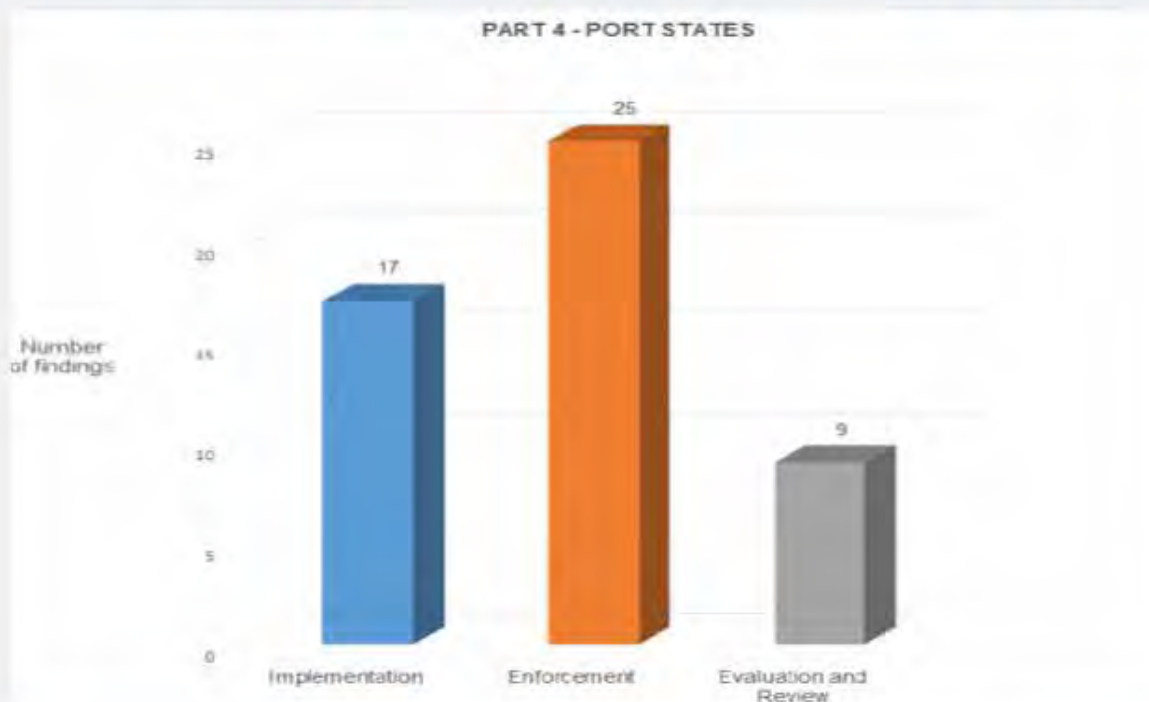


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11



Number of findings under part 4 of the Code – Port States

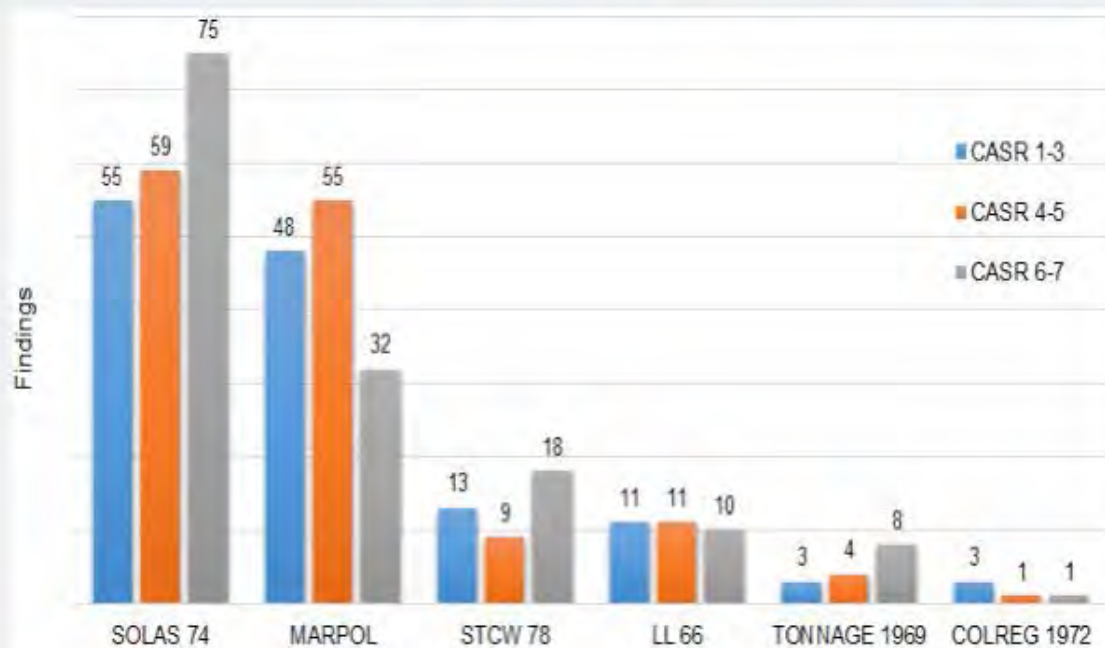


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Non-conformities by mandatory IMO instruments

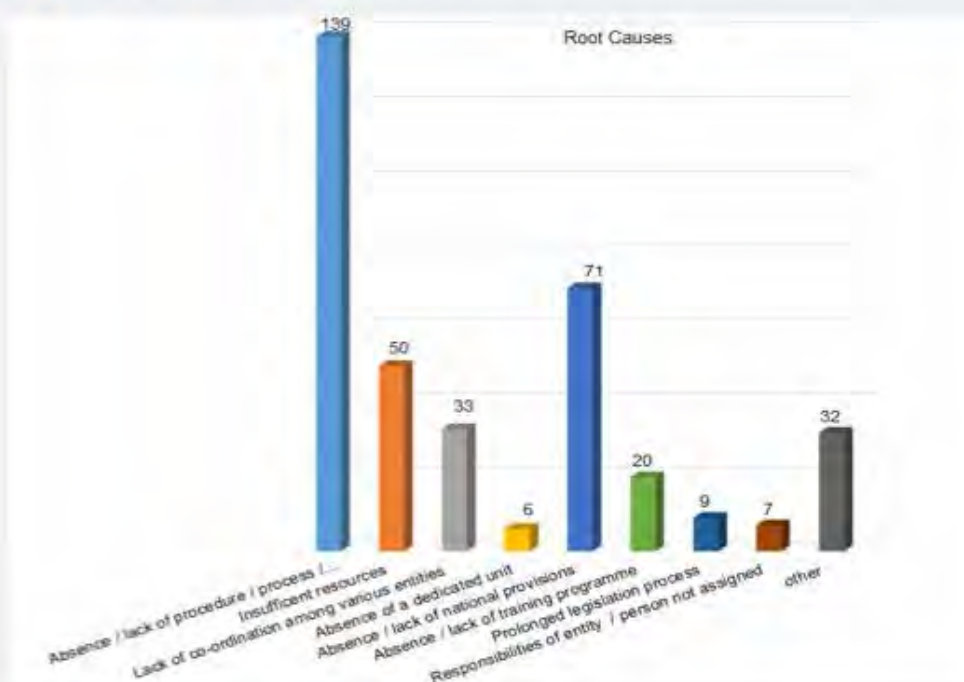


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Analysis of root causes



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Major areas of concern



The following areas of the Code were identified in 45 audits as the most problematic – highest number of findings issued:

- Flag State surveyors
- Delegation of authority
- Initial actions (legislation)
- Communication of information
- Implementation (flag States)

Root causes

Most common underlying causes for findings, as identified by audited States:

- Absence of documented procedures
- Insufficient resources available to maritime administrations
- Lack of national provisions
- Lack of co-ordination among various entities of the State
- Lack of training programmes

CHALLENGES UNDER MANDATORY SCHEME

- Mandatory auditing of Member States pose various challenges for IMO:
- conduct of 25 audits a year to meet the full audit cycle of 7 years;
- availability of auditors to form the requisite teams;
- will Member States meet/be prepared based on the audit schedule which has already been established;

CHALLENGES FOR IMO UNDER MANDATORY SCHEME

- the possibility of some States not responding to the notification for their audits;
- the pool of qualified auditors to undertake the audit has not grown from the voluntary scheme;
- there are now 25 audits scheduled in any given year with the same resource capability of auditors as under the voluntary scheme; and
- the difficulty of selecting qualified auditors to participate in the audits, taking into account cultural and political sensitivities.

CHALLENGES – AUDIT REPORTS!!!!

- What will the reports reveal?
- Will audited States make reports available to all Member States and the public?
- How will the findings from audits be used to improve implementation and enforcement of IMO instruments?
- Will the credibility and cooperative spirit be retained throughout the audit cycle (7 years)?

Questions



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SESSION I

10:00-11:30

Sasakawa Auditorium

JOOSUNG PARK

General Manager, Korean Register



Mr Joosung PARK is senior principal surveyor and general manager of the IACS and International Affairs Team, Korean Register (KR). Since he joined KR in 1989, he performed various functions in the fields of plan approval, ship surveys, and audits as an engineer, ship surveyor, and auditor in the plan approval departments and branch offices. For many years, he has been involved in various regulatory processes in the maritime fields at KR and the national and IMO levels. He also has represented KR in various IACS organizations such as the Working Party on Stability and Load Line, the Working Party on Human Element, and the Statutory Panel, and he is currently the KR member of the IACS General Policy Group (GPG).

Since his first attendance at the IMO SLF Sub-Committee in 1994, he has been actively involved in many of the major IMO issues in various sub-committees and committees such as the Probabilistic Damage Stability regulations, MAPOL 13F and G, GBS, etc. Among the numerous IMO submission papers prepared by him during this period, A24/9/3 (ROK Paper “Amendment to the Code for the Implementation of Mandatory IMO Instruments”) and JWGMSA 2/1 (Annex 2, “Draft Procedures for Member State Auditing proposed by the Republic of Korea”) are related to the framework documents of the IMO Member State Audit Scheme. He also worked as a consultant to the Korean Maritime Ministry in the preparation stage for the IMO voluntary audit.

He studied naval architecture at the Korea Maritime and Oceans University and thereafter obtained master’s degrees in ship hydrodynamics from Chung-Nam National University and maritime safety administration from the World Maritime University. He also completed the Graduate School of Korea Maritime and Oceans University Ph.D. course work on maritime safety and environment protection in 2004.



Role of Class and Improvement of Maritime Regulatory Developments

16 June 2016

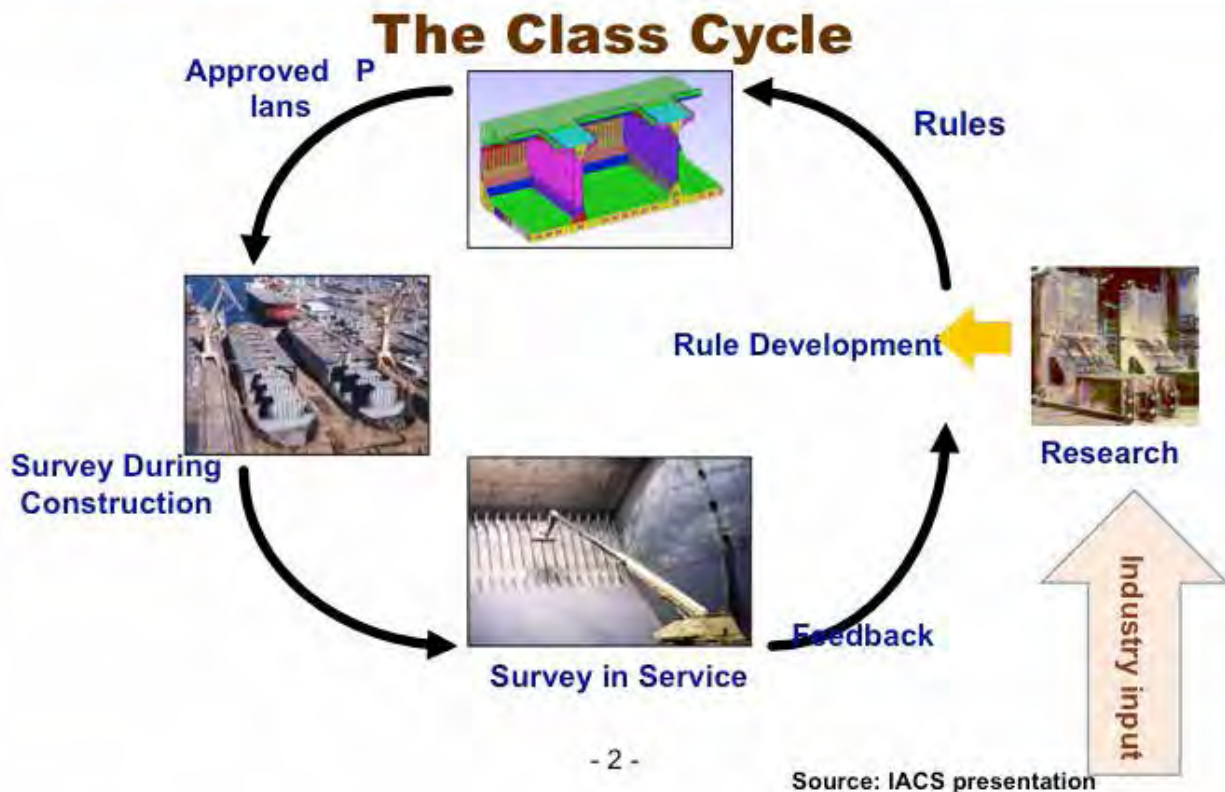
Joosung Park
Korean Register



Contents

- I Role of Class
- II Maritime regulations and its effects on maritime industry
- III Improvement of Regulatory Process
- IV Conclusions

I. Role of Class



I. Role of Class

Relation between Flag & Class(as RO)

- Flag State's duties to ensure safety at sea are laid out in UNCLOS.
- IMO requirements regarding Flag State & Recognized Organization: **Audit Standards**
 - III Code(Obligations of Flag, Port and Coastal States) & Res. 1077(28)
 - SOLAS Ch. I, XI-1/1, LL, MARPOL & RO Code (Delegation of authorities)
- IMO does not make rules, instead SOLAS recognizes classification rules(II-1/3-1 & 3-10)
 - SOLAS states that the ship shall be designed, constructed and maintained in compliance with the structural, mechanical and electrical requirements.
 - Applicable Rules under GBS(II-1/3-10): verification through IMO audit

Classification today is the foundation on which the flag Administration issues certificates in accordance with the international conventions: SOLAS, Load Line and MARPOL

I. Role of Class

Classification vs. Statutory

	Class	Statutory
Purpose	Insurance	Mandatory by Conventions or National legislations
History	250 Years	67 Years (IMCO:1948, IMO:1982)
Tools	Class Rules (Structure, electrical, machinery etc)	Conventions (SOLAS, MARPOL, LL etc.) (Lifesaving, Fire safety, Pollution prevention, Load-line, GBS)
Output	Classification Certificates (for ships, equipment, Type approval)	Convention Certificates (SE, SC, SR, ILL, IOPP, ISPP, IAPP etc.)
Carried out	By Class	Flag (or ROs)
Link	SOLAS II-1/3-1 & 3-10, RO Code, SC Cert linked with Class Cert.	
Note : - GBS, SOLAS Chapter II, ESP (Class -> Statutory) - Stability, IGC Code, IBC Code (Statutory -> Class)		

I. Role of Class

Responsibilities of ROs(Experiences under RO Code)

- General Requirements:

Development of Rules & Regs, Independence, Impartiality, Integrity(Code of Ethics), Competence , Responsibility, Transparency(Information sharing with flag & public)

- Management & Organization:

Quality system (=IACS QSCS), Cooperation with Flags & ROs(transfer of class/flag) , survey network

- Resources:

Capacity to develop rules/research, Exclusive surveyors, minimum qualification

- Statutory certification and Service processes:

Design & development, subcontracting & service suppliers, monitoring & measuring devices, Complaints

- Performance measurement:

Internal audit, VCA for plan approval, surveys, etc, Data analysis, Corrective Action, Preventive Action

- Authorization of ROs: Responsibility of Flag States(Oversight /supervision)

I. Role of Class

Role of KR in Maritime industry in Korea

● Duties of RO acting on behalf of Korea(duties under III Code & RO Code)

- Implementation (& assisting enforcement)
 - PSC/FSC follow-up
 - Reporting, technical feedback, etc.

● Principal Technical Adviser to Maritime Administration through joining

- Preparation of IMO submission papers (35 papers annually)
 - Participation of IMO meetings (16 meetings, 50 experts per year)
 - Industry seminar on IMO outcome
 - Participation of National legislation
 - Development of Maritime policy
 - Participation of maritime research projects
 - Casualty investigation

● Technical leadership in maritime industry (shipbuilders, shipowners, manufacturers, schools, training institutions, research institutes, etc. in Korea)

- Seminars , - Joint work/research , - Maritime cluster activities
 - Rule development , etc.

II. Maritime regulations and its effects on maritime industry (Area of considerations in rule making)

1) Minimum Criteria

- Minimum required safety level (Tolerable residual risk level)
- What IMO meeting?: Convergence process among Member States to a minimum standards, considering "target safety level", "necessary commercial cost", "availability of technology", etc.
- Aim: Need to avoid treating the Standards as "Maximum" , pursue Best practice (e.g. BP design guide)



Self-regulation model for Design/Construction in BP

II. Maritime regulations and its effects on maritime industry (Area of considerations in rule making)

2) Technical/strategic implications

Regulations are important and susceptible to maritime industry (Proper and timely action need : Standard setting org: IMO, ISO, IEC, IACS, etc)

- Propound effect on design/construction process (PMA, Coating, tank test)
- Burdens on shipping industry (GBS, BWM, Polar Code, etc.)
- Conservative (hinder technical advance)
- Standardization of Technology: based on specific product/design (Mid-deck tanker, anti-corrosion steel, E-Nav. Etc.),
Cf. Competition authority's concern on standard setting
- To shipping industry, it is both commercial burden and opportunity for market leading (ex. Green ship-CNTR order)
- To shipbuilders & manufacturers, mostly provide opportunity for additional market (obstacle to less advanced builders)

3) Leadership in maritime industry

- Researches (eg. EU ATOMOS Project)
- Market barrier through local legislation (eg. E Mark)
- Introduction of RBD (change of passenger ship design/building practice, previously applicable to offshore only)

II. Maritime regulations and its effects on maritime industry (Area of considerations in rule making)

4) Regional Regulations

- USA (OPA 90, BWMS, Emission Reg.), EU (SRR, MRV, Sulphur Directive, Place of Refuge, MR)
- Unilateral actions: cause confusion in implementation of regulations and add financial burden. To avoid negative impact on industry, need to have single set of rules through multi-lateral agreement at IMO. IMO need to speed up the regulatory process/decision.

5) Hardware vs. Software requirements

- Hardware solution such as structure, equipment (Fitting the job to the person) is desirable.
- Inevitable to introduce software requirement such as operational restrictions, training (Fitting the person to the job).
- Hardware requirement is supplemented by Human element aspects. This requires adjusting time to establish new industry system in the area of different safety culture.

6) Requirement for Function

- Prescriptive Rule: set solution for required function.
- Examine the compliance with functional requirement at the final stage of the product (ignore the intermediate process)
- Complex control system, integrated operation equipment installed on board ship need multi-step design-approval process (need to redefine design and development process).

II. Maritime regulations and its effects on maritime industry (Area of considerations in rule making)

7) Expansion of object of regulations

- Object of Regulation is expanded from ship("ship shall be provided with...") to other maritime supply chain(shipbuilder quality, owner/operator, CNTR weighing, Port authority, etc).
- Change of IMO's role(IMO audit scheme, GBS audit, etc.)
- Need to establish feasible/implementable regulatory regime
- Fragmentation of safety systems: duplication of surveys & inspections(Port State, Class, Oil terminal, Survey Company). Need to establish **Holistic safety regime**.

8) Legislative & Administrative burden

- Administrative burden: not need or unnecessarily excessive administrative requirements(563 numbers in various IMO instruments)
- Extra Burdens to Administrations, Shipowners/operators, crew and impede safe operation
- Need to change regulatory process to reduce/minimize the administrative requirements

9) Balance between Safety and Environment protection

- Conflict between safety and environmental requirements(Ballast exchange vs. stability, GBS robust ship vs. energy efficiency, etc)
- Need cautious approach(avoid excessive requirements and maintain balance)
- New technology need to solve such colliding requirements at the same time

III. Improvement of regulatory process

1. BWMS and Industry submission to IMO

Structured Approach for the Development of Regulations

Lessons learned from

BWMS Convention : Worst case (?), Caused confusion, trial & error, financial burden, uncertainty

- Gathering sources of reliable data and collective experience (to judge the compelling need for new reg.)
- Consider whether IMO action is necessary now(consider other measures if exist)
- Using cost-effectiveness and impact analyses(to estimate short-term and long-term benefit of new reg.)
- Assessing the availability of suitable technologies
- Evaluating the transparency and robustness of approval procedures for new equipment
- Considering the impact on manufacturers(to produce and deliver the required systems)
- Assessing the availability of clear and unambiguous criteria for surveying, testing new tech
- Considering an achievable timeframe(to test and consolidate a tech. before deciding EIF)
- Evaluating potential conflicts of benefits and detriments between environmental, economic and social issues assuming safety and security as paramount by applying RBA

III. Improvement of regulatory process

2. Methodologies for rule making(Prescriptive vs. Goal-based)

1) Prescriptive regulations

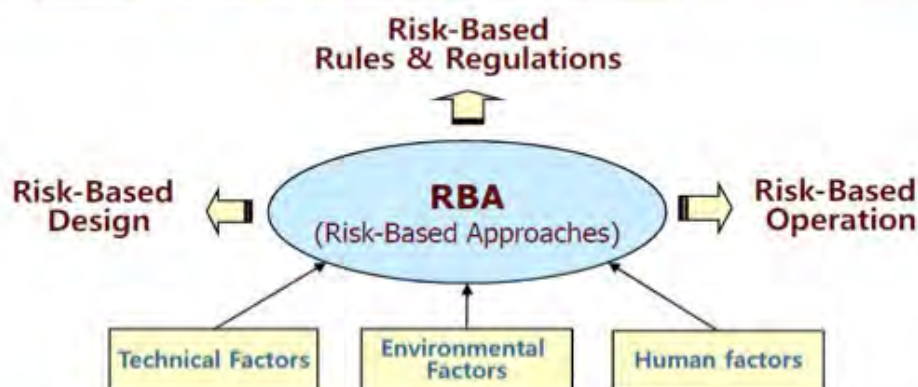
- Casualty driven
- Establish the regulations mostly based on past experience and statistics(Reactive, not proactive). Gap with current situation/practice exist.
- Limited design flexibility, impede technological advancement.
- Not easy to apply to noble type ship design
- Slow regulatory process
- Current safety level not known
- Suitable for mass shipbuilding process

2) Goal-based regulations

- Overcome the limitation of the Prescriptive rules
- Rules for rules, not rules for ships(IMO defines "Broad, overarching safety and environmental standards that ships are required to meet during their lifecycle" and associated "Functional requirements" only)
- Can use Risk-based/performance-based rule

III. Improvement of regulatory process

2. Methodologies for rule making (Risk-Based Approach: RBA)



- Define the acceptable safety level in the rule through repetitive evaluation and reduction of risks.

1) Risk-based Design

- 2) Risk-based approval(Alternative/equivalent design & approval)-SOLAS II-1/55 (machinery/electric),II-2/17 (fire),III/33(lifesaving appliance), MARPOL /I, 13F(Double Hull alternative): increase the flexibility of design, need more time in engineering analysis (risk modeling and evaluation, etc), not suitable to mass production(Applied selectively to passenger ships)

III. Improvement of regulatory process

2. Methodologies for rule making (Other Risk-based Approaches)

3) **Class safety hierarchy** (EU MR, use of Simplified risk-based model)

4) Risk-based **Operational standards**

- Risk-based Survey standards
- Risk-based quality system(new ISO 9001: Risk-based management) and risk-based audit standards

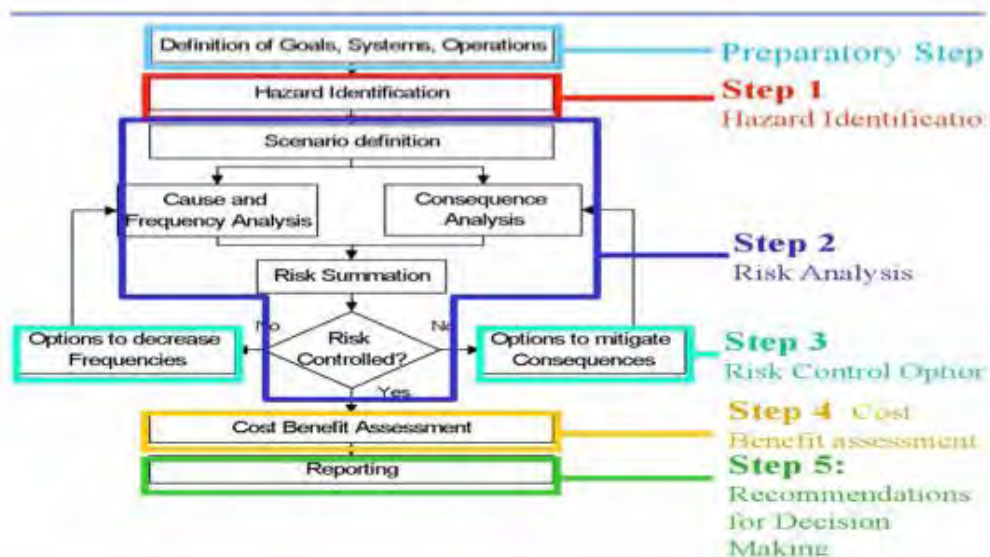
5) **Merit & demerit of Risk-based Regulation**

- Increase transparency of design/approval and objectivity
- Easily incorporate technological development in the design and standard. Increase design flexibility and enable cost-benefit design
- Provide better information to regulators. Remove the need of frequent amendment of regulations
- Involve many technical procedures(fire test, engineering analyses, etc) creating excessive design/approval time
- Need systematic and standardized approach about alternative design process

III. Improvement of regulatory process

3. Future Regulatory Process: RBA

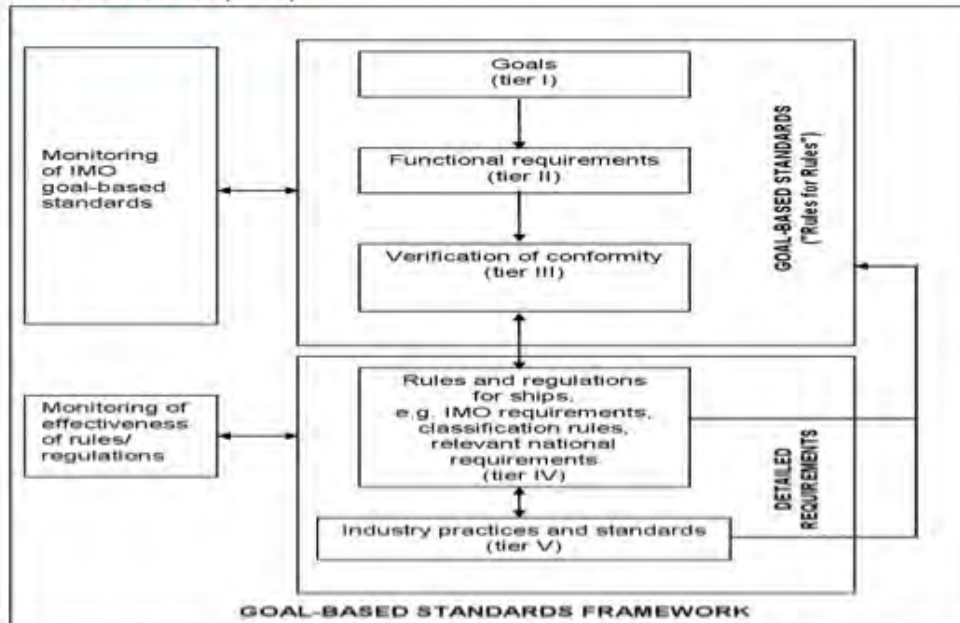
1) **Formal Safety Assessment(FSA)**



III. Improvement of regulatory process

3. Future Regulatory Process: RBA

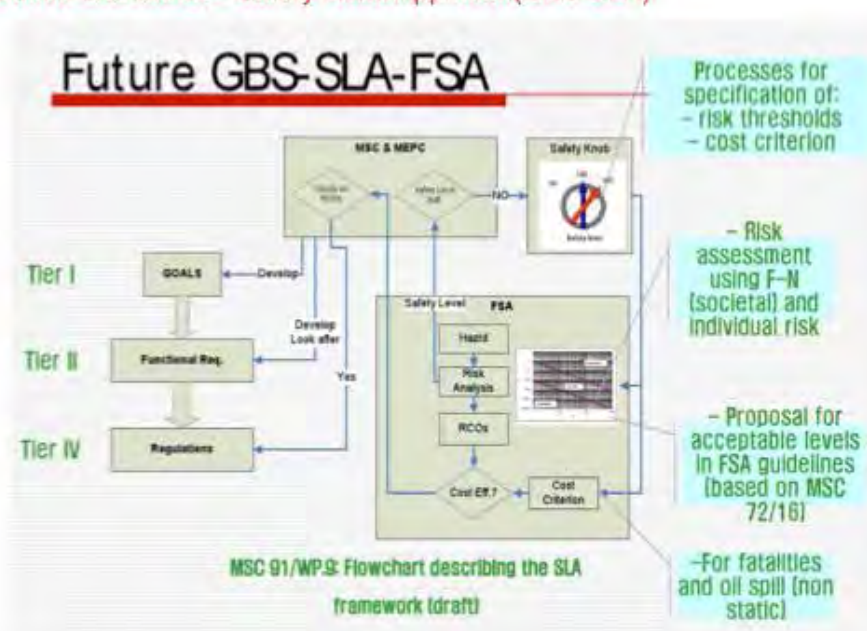
2) Goal-Based Standards(GBS)



III. Improvement of regulatory process

3. Future Regulatory Process: RBA

3) Goal-Based Standards – Safety Level Approach(GBS-SLA)



III. Improvement of regulatory process

4. Other Considerations

1) Impact Assessment(IA)

- IA: Future result of current or proposed actions(difference of situations when proposed actions taken and proposed actions not taken).
- Testing of the changed rules based on Risk-based models(secure transparency and objectivity of the regulatory process)
- FSA enables the test by establishing risk model for Generic ship type(evaluation on the benefit of the proposed rule changes: **Regulatory Impact Assessment**)
- Can achieve the balance between technical elements and operational elements. Can use as a means to compare current rules and changed rules
- EU: Mandated use of EU "Impact Assessment Guidelines" before introducing new regulation.

2) Consideration of Human Element

- Applied in very limited cases(Bridge/Engine room arrangement, GBS, ECDIS standard, etc)
- Relevant checklist provided in IMO Strategy and Process have not been used actively
- Tools for incorporating HE during rule making: * HEAP(Human Element Analysing Process)
 - * Applying HRA(Human Reliability Analysis) in FSA process(Identification of HE hazard-> Analysis of risk associated with Human Element->Risk control option- RCO related with human interaction with system-> combine with other RCOs identified through FSA Process)

IV. Conclusions(summary)

- * Understanding the class mechanism and Class vs. Statutory
- * Understanding key roles of Classification and class as RO(also as principal technical advisor) in the maritime safety chain.
- * Role of RO in terms of IMO Member State Audit Scheme and Audit Standards : III Code & Res, 1077(28), RO Code,
- * Understanding implications of maritime regulations
- * Understanding the status and limitations of current regulations and rule making process
- * To improve IMO and national regulatory developments in maritime field by adopting improved regulatory process

Thank you



SESSION

2

12:00-13:00

Sasakawa Auditorium

Speaker 3

Hemming HINDBORG

Speaker 4

Sok-Hun KIM

Moderator

Dong-Woo HA



SESSION 2

12:00-13:00

Sasakawa Auditorium

HEMMING HINDBORG

Director DMA, Denmark



Hemming Hindborg graduated from the Copenhagen Nautical College, Denmark, with a Shipmaster's Examination in 1979. In 1987 he completed the education as Maritime Lecturer, Nautical Science, at the Danish Technical University in Copenhagen.

As a former seafarer, Hemming Hindborg has obtained practical experience as Deck Officer on board various ship types in world-wide trade. After finishing his career as Deck Officer, he joined the Copenhagen Nautical College as Maritime Lecturer from 1983 to 1989.

In October 1989 he joined a Danish shipping company and worked with education and manning issues continuing as Nautical Superintendent responsible for developing a Quality and Safety Management System and the internal and external auditing.

In 1997 he joined the Danish Maritime Authority (DMA) and is currently the Quality Manager responsible for the Quality activities and the IMSAS. He was the Head of Maritime Education and Manning Division from 2003 to 2009.

Hemming Hindborg was the SPC preparing Denmark for the IMO Voluntary Audit in 2006. He was appointed by Denmark as IMO Auditor in 2006 and has been the Audit Team Leader during IMO audits. He has also been the IMO auditor on mock audits, lecturer on IMO training courses for auditors and regional and local workshops on the Audit Scheme. In the years 2011, 2012 and 2013 he was the Chairman of the IMO Joint Working Group Member State Audit preparing the mandatory Audit Scheme with the draft III Code, the Framework and Procedures and the Auditors Manual. Hemming Hindborg is an advisor to maritime administrations regarding Maritime Education and Training and preparation for the IMSAS audit.

Seminar

Korea Maritime Institute (KMI)

World Maritime University

IMO Auditing Schemes: Current Practices and Future Challenges

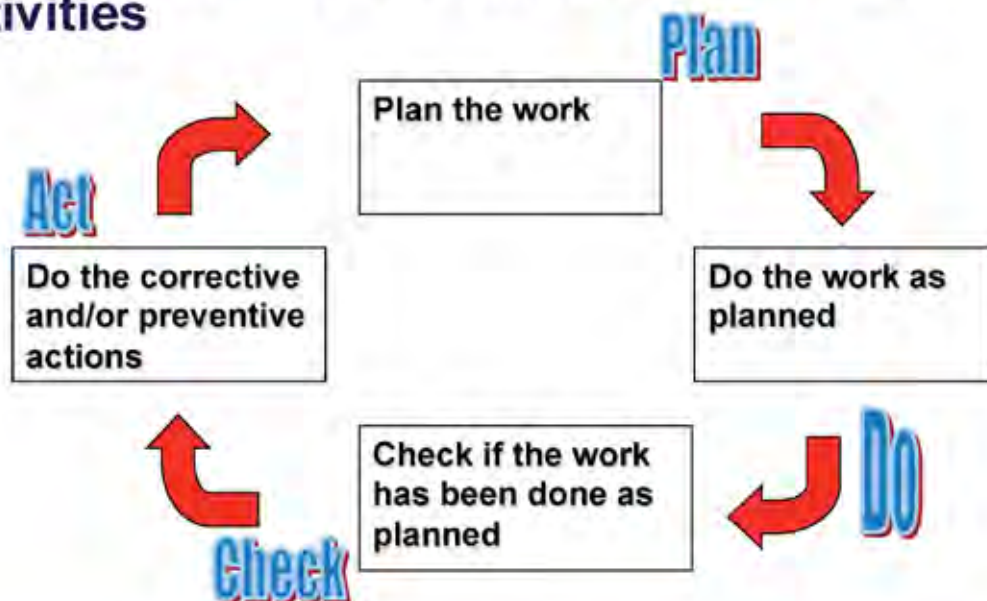
Quality Manager Hemming Hindborg
Danish Maritime Authority

Hemming Hindborg, background

1975 - 1979	Apprentice – Master Mariner Examination
1980 - 1982	Deck Officer – tankers - Maersk
1983 - 1989	Maritime Lecturer
1989 - 1990	J. Lauritzen A/S, recruiting apprentices, manning
1990 - 1996	J. Lauritzen A/S and EAC Shipping A/S. Nautical superintendent, quality coordinator and DP.
1997 - 2001	Danish Maritime Authority. Special Adviser. Assessor, quality coordinator. DP training ship DANMARK.
2001 - 2003	DMA quality coordinator Technical Division.
2003 - 2011	SFS, Head of MET division
2006 -	Denmark Central Point of Contact – VIMSAS audit
2007 -	IMO VIMSAS/IMSAS Audit Team Leader
2011 -	Chairman of IMO JWGMSA
2012 -	Quality Manager in DMA

Requirements regarding Quality Management in the III Code

The IMO auditors are auditing the "PDCA" activities



III Code

Common Areas - Improvement

- 11 States should continually improve the adequacy of the measures
- 12 The State should stimulate a culture which provides opportunities for improvement of performance
- 13 Further, the State should take action to identify and eliminate the cause of any non-conformities

III Code

Flag State, coastal State and port State

Evaluation and review

The State should periodically evaluate its performance in respect of exercising its rights and meeting its obligations under the applicable international instruments.....

Who is auditing us....?

Internal ISO 9001 Audits (yearly)

Internal ISM Code audits (yearly) of inspection ships and company

Business Excellence evaluation

VIMSAS Audit of Denmark (2006)

External ISO 9001 certification audits (yearly)

External ISM Code certification audits (yearly by RO) of inspection ships and company

Independent evaluation of DK MET (STCW I/7) (every 5 year)

EMSA audits and inspection of DMA (yearly)

EU Commission and EMSA - ISPS inspection of DMA (every 2 year)

The Danish national audit office – "Rigsrevisionen" (every year)

IMSAS IMO Audit (III Code) (Maybe 2019?)



Preparing for the VIMSAS and now IMSAS of Denmark



Preparing Denmark for the IMO Audits

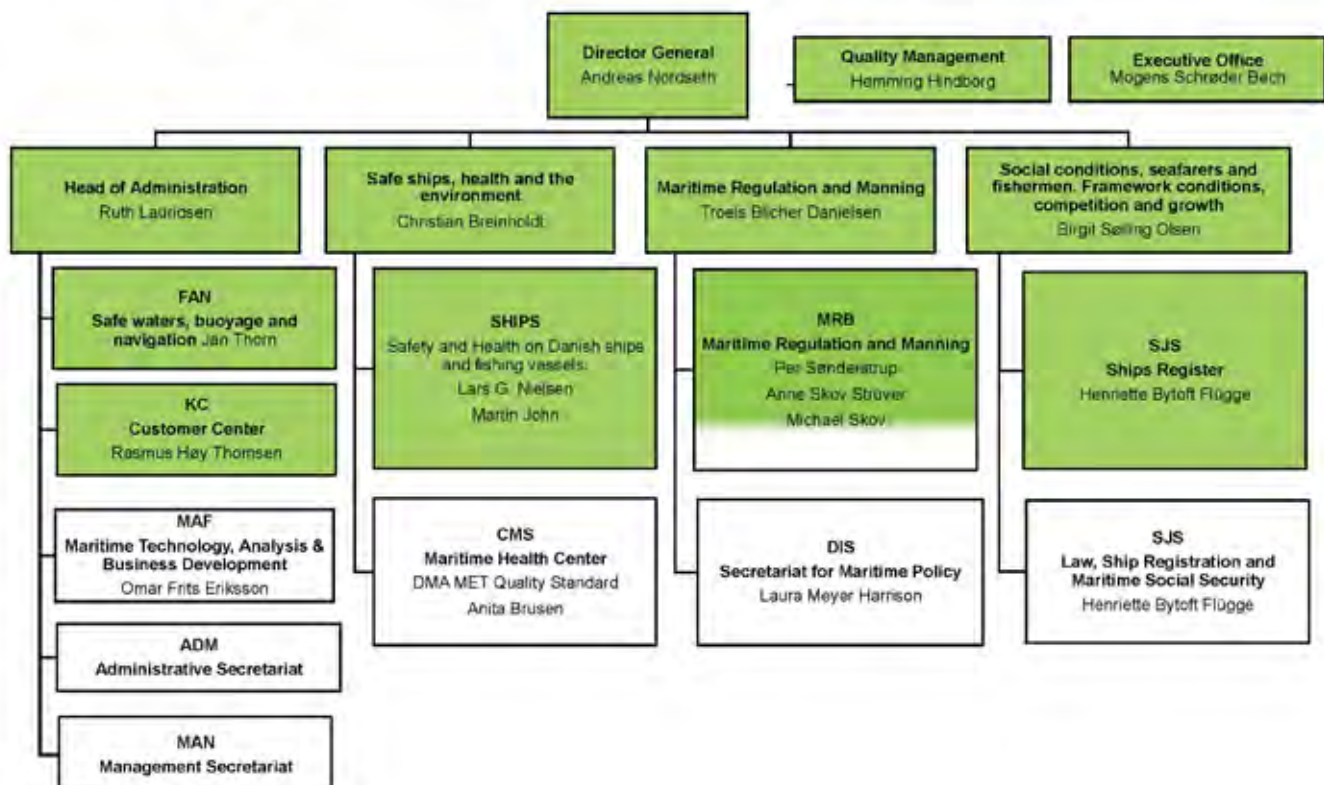
Internal VIMSAS/IMSAS audits covering all relevant government entities. Carried out in English.

The Audit scope: The IMO Conventions, the Code and the Pre-Audit Questionnaire.

In 2006 we had 5 days of internal auditing and the internal audit team noted 35 findings, recommendations and observations. It was presented during the closing meeting (one month before the external IMO audit).

Today DMA has included the III Code in the scope of the yearly internal ISO 9001 audits.

DMA organization (a few days ago....)



Where do we work?

Danish Maritime Authority
Copenhagen moving to Korsør in 2017

Technical Centers (FAN)
Grenå

Korsør closing the center by end 2016

Inspection Ships (FAN)
JENS SØRENSEN, Grenå
POUL LØWENØRN, Korsør

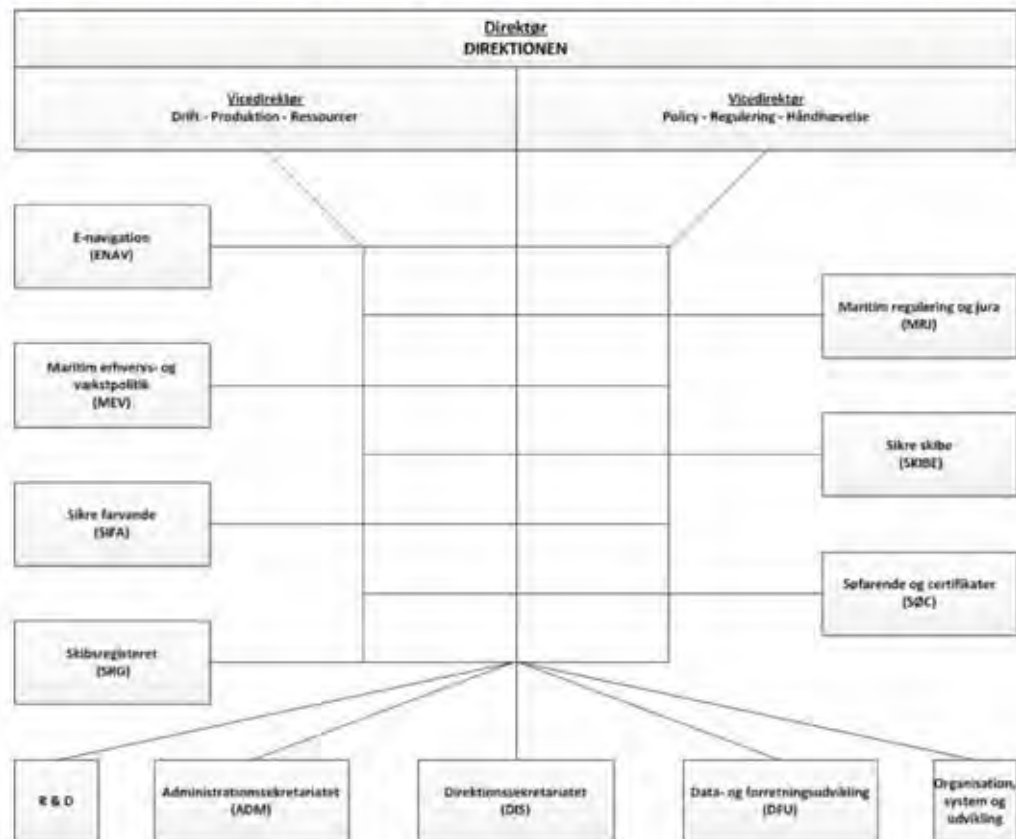
Ship Certification and survey (SHIPS)
Aarhus
Esbjerg
Fredericia
Frederikshavn
Svendborg
Thyborøn
Nuuk

CMS, Fanø

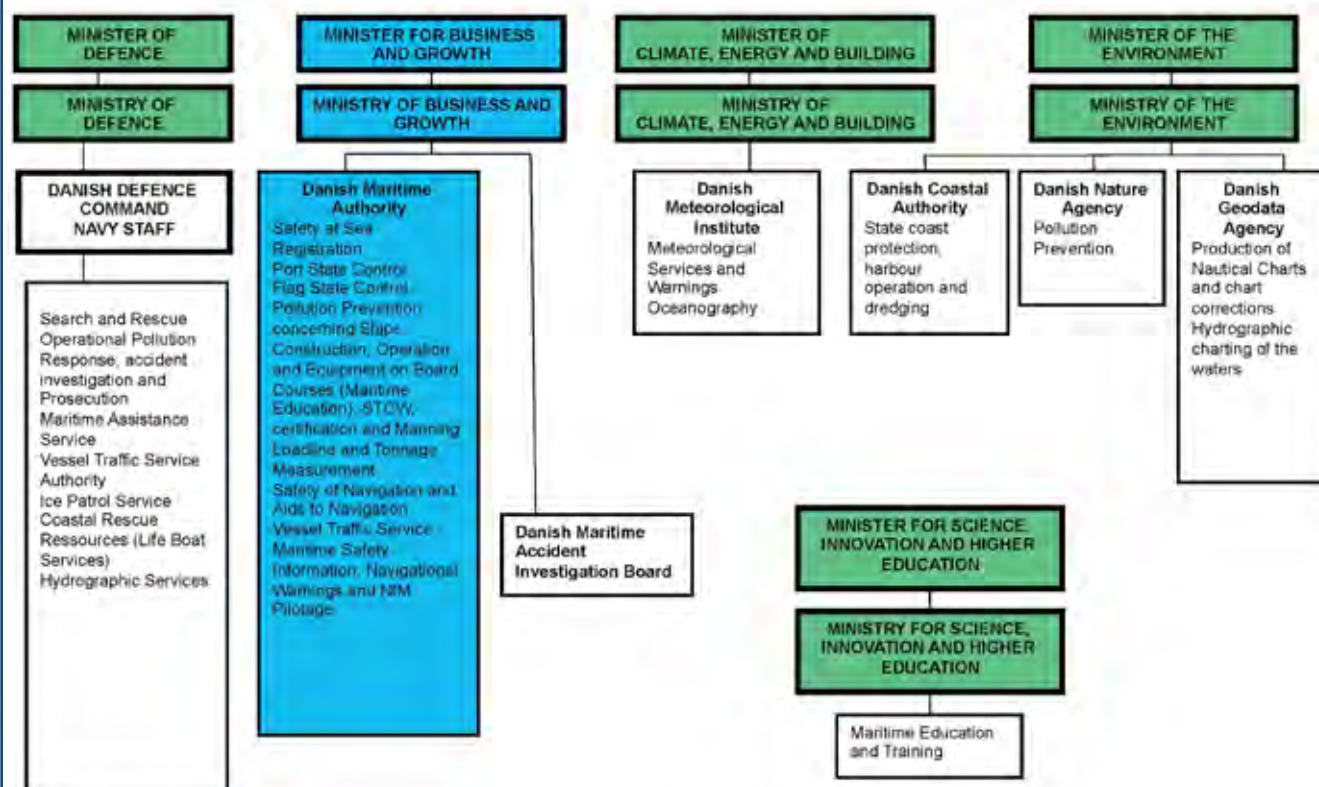
DMA, Færøerne (FAN)
Loran-C station, DGPS station, light houses



DMA organization (today) – some of the challenges...



Distribution of Areas of Responsibilities between Danish Government Entities within the Scope of the IMO Conventions (2015 update)



DANISH MARITIME AUTHORITY

The IMO Audit of Denmark – time line

14 December 2005

January 2006

January 2006
government

31 March 2006

March 2006

May 2006

14 June 2006

22 June 2006

14 - 18 August 2006

September 2006

18 - 25 September 2006

25 September 2006

16 October 2006

January 2007

9 February 2007

30 June 2008

Denmark request the IMO for a VMSAS audit.

A central point of contact is nominated.

A national group with participants from all relevant entities is established to prepare the PAQ.

The Pre-audit questionnaire is forwarded to the IMO.

The audit date is confirmed by the IMO.

A VMSAS auditor course was held in Denmark.

PS and HHI were appointed as IMO auditors.

The Memorandum of Co-operation is signed.

Internal VMSAS audit of Denmark.

Updated version of the Pre-audit Questionnaire

VIMSAS audit of Denmark.

A draft Audit Interim Report was presented at the closing meeting.

The Audit Interim Report was completed

Corrective Action Plan was completed.

The Final Audit Report including the Corrective Action Plan was completed and published on www.dma.dk.

Audit Summary Report and Audit Mission Report are completed.

Corrective actions are completed.

The impact on the Quality and Safety aspects of the Maritime and Shipping Industry?

What Quality and Safety impacts do we expect?

3 examples and corrective actions from the VIMSAS of Denmark in 2006....out of a total of 8 observations reported after the audit....



Observation....and corrective action in DK

Observation:

It was established during the audit that **no independent evaluation of the effectiveness** of navigational information provided by RDANH and weather forecast by DMI.

Corrective Action;

RDANH, KMS and DMI will seek opinions from SOLAS ships in Danish ports or passing through Danish waters. The review will evaluate the effectiveness of the information provided by Denmark and will make recommendations as appropriate.



Observation....and objective evidence in DK

In a few examples it was observed that **enforcement action against shipping companies following the detention of their Danish Ships did not appear to have led to a significant improvement** in their PSC performance. It was concluded that enforcement provisions did not appear to be sufficiently robust to deal with persistent infringements of mandatory instruments.

Evidenced by:

- a. Number of detentions has exceeded the target
- b. Reoccurrence of same companies in detention statistics
- c. In 2006 -5- companies contributed to 52% of the detentions
- d. Follow up on unscheduled inspections appear to have concentrated more on the seaworthiness of the vessels rather than their operational efficiency.
- e. It was stated that due to legal reasons the withdrawal of the company DOC was potentially difficult.

Observation....and corrective action (example)

It was established that the State has **no strategy** for meeting its overall obligations and responsibilities contained in the mandatory IMO instruments to which it is a Party.

This was evidenced by the lack of documentation setting out the strategy;

(Code, Part 1, paragraph 3).

The impact on the Quality and Safety aspects of the Maritime and Shipping Industry?

Denmark continues to support the IMO with qualified auditors, lecturers for the ongoing training of auditors, workshops regarding the audit scheme etc.

We may also carry out mock audits, train local internal auditors and assist the Member State to follow up on the audit and ensure the implementation of the necessary corrective action.

The Maritime and Shipping Industry has been working with Quality and Safety Management systems for many years since very early 90's...but what about the Maritime Administrations?



Future challenges with the audit scheme?

What are the future challenges?

What have we learned after the 10 years of VIMSAS audits – any major challenges ahead of us? Have we so far only been auditing "the best in class"?

Denmark look at the mandatory *IMSAS Audit Scheme* as a strong tool in the implementation of the IMO instruments provided that we through IMO and the relevant committees and sub-committees and not least through technical corporation openly can discuss "lessons learned" and how and what can be done to improve what we are doing.

The Member States must prepare themselves for the IMSAS audit.....not just a last minute activity....!



Future challenges with the audit scheme?

Since 2006 we did have some challenge with a few States....

Do we need to consider what to do with the open registers and other registers with no port and coastal State activities?



Lessons learned – openness and transparency

- **Why are some of us so afraid to publish the Audit report and the Corrective Action Plan (CAP)?**
- **Could we think of any external parties that could be interested in reviewing the Final Audit Report and the CAP? Maybe the Shipowners....?**

We also believe that a transparent IMSAS is the best way forward to assist Members States and the IMO in the implementation.

Therefore our hope is that the Member States will authorize the IMO to release the reports and corrective action plan from the future IMSAS audits.



Future audits and a new GISIS Module!

A new GISIS module on MS audits (MSA) has been developed to help the audit teams.....

Audit teams will have access restricted to the MS they are auditing in order to use all necessary documents. An online tool will create draft audit interim reports and draft executive summary reports which will align the reports and make them comparable.

Denmark welcomes the new module in GISIS and it is our hope that the GISIS module also can provide a good basis to analyze observations made during audits in order to identify common grounds where Member States experience difficulties in their implementation.

But we must take care about the bureaucracy, paperwork, reporting etc.

Take care we do not use more time on preparing, reporting and follow-up on the audit compared with the actual time used on meeting the people doing the job in the MS.....!



ANY QUESTIONS?





SESSION 2

12:00-13:00

Sasakawa Auditorium

SOK-HUN KIM

Deputy Director, Ministry of Oceans and Fisheries



Mr Sok-Hun Kim, Master Mariner, is currently a deputy director of the Maritime Industry and Technology Division and is responsible for developing an e-Navigation system in Korea.

From September 2012 to August 2015, Mr Kim was seconded as a technical officer to IMO and contributed to the harmonization of the global Port State Control activities. As a staff of the Department for Member State Audit and Implementation Support, he fulfilled the IMO Secretariat's tasks for the III Sub-Committee, MSC Committee, and Assembly, implemented global and regional technical cooperation activities funded by IMO and the Republic of Korea, developed data exchange protocols with PSC regimes and facilitated data exchange with them through the GISIS module on PSC, participated in Supervisory Committee meetings and Editorial Board meetings of Equasis as an IMO representative, cooperated with the FAO to help fishing vessels of 100 gross tonnage and above apply for the IMO ship identification number scheme, and developed the harmonized coding system in cooperation with the Paris and Tokyo MoUs.

Since 1995, prior to his career at IMO, he was engaged in enacting the relevant Korean laws and regulations that are necessary to give the STCW Convention full and complete effect, he also developed and established the shore AIS, VMS, SSAS, and LRIT system, vitalized domestic shipping between the two Koreas, and introduced the ISM code and PSC activities. He was also involved in various bilateral meetings with other respective countries and multilateral meetings, such as the Asia Maritime Forum, the Pacific Heads of Maritime Safety Agencies Forum, and the IMO and IALA meetings.

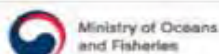
In 1990, he received his bachelor's degree in engineering (nautical science) from the Korea Maritime & Oceans University.

VIEWS ON IMSAS AS A MEMBER STATE TO IMO



Mr. Sok-Hun, KIM

Deputy Director/Department of Maritime Industries
- The Ministry of Oceans and Fisheries -



CONTENTS

I

IMSAS

II

EXPERIENCE in VIMSAS

III

VIEWS

IV

PROPOSAL



2

0

Do you agree?

I ♥
AUDIT

0

Auditing means?



0

Auditing means?



I

IMO Member State Audit Scheme



I

IMO Member State Audit Scheme

❖ IMO was established to adopt legislation and Governments are responsible for implementing them.

➤ When a Government accepts an IMO Convention it agrees to make it part of its national law and to enforce all of the provisions contained therein.

I

IMO Member State Audit Scheme



❖ It commenced from 1 January 2016

➤ The aim of determining the extent to which they give full and complete effect to their obligations and responsibilities contained in a number of IMO treaty instruments.

I

IMO Member State Audit Scheme

❖ The mandatory IMO instruments are:

- SOLAS 1974 and its 1988 Protocol;
- MARPOL;
- STCW 1978;
- LL 66 and its 1988 Protocol;
- Tonnage 1969; and
- COLREG 1972.

II

Results of VIMSAS in KOREA

❖ The Audit of the Republic of Korea (ROK) was undertaken from 9 to 16 April 2007.

- ✓ The maritime administration of the Republic of Korea substantially meets the obligations.
- ✓ There were some areas (findings) where improvements could be made.

II

Results of VIMSAS in KOREA

Legislation

Flag State activities

III

Views

No penalty, No success?

III

Views

It is reasonably expected that the audit scheme will bring about many benefits.

III

Views

identifying areas where States may have difficulties in fully implementing IMO instruments;

identifying the reasons for the difficulties in implementing them; and

providing the Member States with valuable feedback, intended to assist them in improving their own capacity to put the applicable instruments into practice.

III

Views

Generic lessons learnt from audits could be provided to all Member States so that the benefits could be widely shared.

Moreover, the results of the audits could be systematically fed back into the regulatory process at IMO to help make measurable improvements in the effectiveness of the international regulatory framework of shipping.

IV

Proposal



IV

Proposal

IMO's Integrated Technical Cooperation Programme



IV

Proposal

Raise awareness of IMO within the broader audience of global leadership



IV

Proposal

Voyage Together



THANK YOU FOR ATTENTION





SESSION

3

14:30-16:00

Sasakawa Auditorium

Speaker 5

John HANNON

Speaker 6

Han-Seon PARK

Speaker 7

Christine BERG

Moderator

Daniel MOON

16:30-17:30

Panel Discussion (and Q&As)

Sasakawa Auditorium

Moderator

Jens-Uwe SCHRÖDER-HINRICHS

17:30

Closing Remarks

Sasakawa Auditorium

Moderator

Jens-Uwe SCHRÖDER-HINRICHS

SESSION 3

14:30-16:00

Sasakawa Auditorium

JOHN HANNON

Programme Manager and Director, US Flag and Military Sealift Vessel Inspection Policy, US Coast Guard



Mr Hannon is a federal civilian at U.S. Coast Guard's Headquarters, Washington D.C, in the Office of Commercial Vessel Compliance. He manages policy for the Coast Guard's safety, security and environmental protection compliance inspection and certification program for U.S. Flag commercial vessels. Mr Hannon directly manages the Coast Guard's agreements with the U.S. Navy Military Sealift Command as well as the U.S. Maritime Administration for certification of government owned Sealift Ships. His other areas of specialty are reflagging of foreign ships to the U.S. flag, oversight of the Coast Guard's delegation of inspection activities to recognized classification societies and implementation of the International Safety Management Code for Ships. Internationally, he is the Assistant Head of Delegation to the International Maritime Organization (IMO) subcommittee for Implementation of IMO Instruments (III). He was a member of the U.S. delegation to the International Labor Organization (ILO) during development of flag state guidelines for implementation of the Maritime Labor Convention 2006 (MLC).

Most recently he was the coordinator of the IMO project to develop comprehensive international standards for recognized organizations (class societies) that perform safety and environmental compliance inspections on commercial ships on behalf of flag administrations. He is a lead auditor for the IMO member state audit scheme and is the U.S. representative on the IMO audit scheme working group. He is past chairman and a current member of the International Association of Classification Societies advisory Committee on Quality.

Prior to his career as a federal civilian he was a Commissioned Officer in the Coast Guard with assignments in the ports of New York, Baltimore and Coast Guard Training Center Yorktown VA.

Mr Hannon has a BS in Marine Transportation from the State University of New York Maritime College, Ft. Schuyler NY; an MS in Quality Systems Management from the National Graduate School, and is a distinguished graduate of the U.S. Naval War College. He has two grown daughters and three granddaughters who reside in Fredericksburg, Virginia.

IMO Member State Audit Scheme

Presentation to the World Maritime University

Mr. John J. Hannon



Homeland
Security



United States
Coast Guard

Background

- The initial framework for the IMO Audit Scheme was developed via a Joint Member State Working group. It was based in large part on a Quality Systems Management Approach similar to ISO 9001.
- Denmark served as coordinator for the intercessional correspondence group and crafted the initial framework.
- First Voluntary IMO Audit was carried out on Denmark in 2006.

IMO Audit Scheme Standards

1. The IMO Mandatory Instruments*
 - List of effective IMO mandatory instruments is maintained by the III Subcommittee work group for the HSSC.
 - Issued as a new Assembly Resolution every two years
2. III Code & RO Code
3. Guidelines for conducting the Audit

* The audit only includes those IMO Instruments to which the member state is signatory!

Organizing an Audit

- Audit Team is typically three persons
 - Ideally at least one Team Member should have some experience in each of the functional areas of the audit.
- Very important to agree on an audit schedule well in advance of the audit and ensure that the correct people are present for the interviews.
- Having a single Point of Contact with the audited administration who can coordinate is essential.
- Detailed review of Pre-Audit questionnaire and review of any other information publically available.

Sample Audit Plan

[date] Day 1	[date] Day 2	[date] Day 3	[date] Day 4	[date] Day 5	[date] Day 6
Opening Meeting All Auditors Strategy, structure and responsibilities of entity(s) comprising the maritime administration. Processes for continual review. Risk analysis, performance measurement/evaluation [Member State representatives/bodies] All auditors Legislation processes, Review of legislation, interpretation, and guidance notes [Member State representatives/bodies]	Implementation of MARPOL, Operational pollution response – enforcement, SAR coordination [Member State representatives/bodies] Review of policies for the implementation of MARPOL, Tonnage and Load Lines [Member State representatives/bodies] Implementation of MARPOL, Tonnage and Load Lines [Member State representatives/bodies] Review of policies for the implementation of SOLAS [Member State representatives/bodies] Implementation of SOLAS [Member State representatives/bodies] Legislation processes and implementation of STCW (note 1) – [Member State representatives/bodies]	Implementation of MARPOL [Member State representatives/bodies] Coastal rescue, Aids to navigation [Member State representatives/bodies] RO Monitoring [Member State representatives/bodies] Implementation of survey, policies for PSC, flag State inspection, surveys [Member State representatives/bodies] Surveyor training and recruitment [Member State representatives/bodies]	Implementation of survey, PSC, flag State inspection policies [Member State representatives/bodies] Rescue, aids to navigation etc. [Member State representatives/bodies] Any outstanding issues	Casualty investigation [Member State representatives/bodies] Review of policies for the implementation of COLREG and SOLAS chapters IV – V incl. training policies for VTS, AIS and remaining navigational issues [Member State representatives/bodies] Any outstanding issues All auditors private meeting	Closing meeting – submission of draft interim report plus findings

Progress of the Audit

- Keep opening meetings short and focused.
 - Outline the terms of reference and the scope of the audit.
- Get an overview of the administrations organization and their overall strategy for implementation of the IMO Mandatory Instruments.
- Transferring IMO instruments into National Laws and regulations varies greatly from nation to nation. Take time to understand the process and what are the challenges presented by that process.

Regulatory and Legal

- Use one of the new or amended IMO Mandatory Instruments as a case study to see how the administration moved it through its various departmental components to achieve implementation.

Strategy

- This is a classic quality systems management approach.
- Key Elements
 - Defined Objectives
 - Measurement to see if objectives are met
 - Coordination between governmental components
- Interview of Senior Leadership and their commitment to achievement of the organizational goals.

Divide the Audit Team

- On the second and third day the team can divide into the various areas of the audit.
 - Flag State
 - Port State
 - Coastal State

Flag State

- This is the most detailed part of the Audit and has the most focus. (SOLAS, MARPOL, Loadline, Tonnage)
- Ensure that the basic structure is present:
 - Regulations & Procedures
 - Record Keeping/Document Control
 - RO agreements and RO Oversight
 - Resources: Workforce
 - Authority: Evaluation of Extensions, Equivalencies & Exemption requests

RO Oversight

- Does the Administration meet the mandatory standards in the III Code to have an effective oversight program
 - Also RO Code Annex on oversight (not mandatory)
- Do the RO's meet the RO Code? How is this verified?
- What level of interaction does the flag have with the RO?
- Does the flag keep its instructions up to date with the RO
- What is the level of access to RO records for ships of the member states flag.

Casualty Investigation

- Select a sample of vessel casualty investigations.
 - Note: The IMO Casualty Investigation Code only requires investigations in the event of a death or the loss of the vessel.
- Is management of the Casualty Investigation process independent from the vessel certification process?

Vessel Inspection

- Get the list of detained vessels from the PSC MOU's for the last 3 years for the flag undergoing audit and verify that corrective action was taken by the flag.
- Sample some vessel records and review the results
 - Were there deficiencies and what was the follow up?
 - What were the qualifications of the surveyors attending?
 - Does the flag have the capacity to attend a vessel when it is outside its country?

ISM Code

- Does the flag delegate ISM to an RO?
- What action does the flag take when the RO surveyor issues an IACS PR 17?
- Is compliance with ISM Code audit considered when a vessel is the subject of a PSC detention?

Port State

- Does the member state follow the IMO PSC guidelines?
- Does the member state make required reports to the IMO?
- Does the member state make required reports to other flag administrations when they detain vessels belonging to the other flag?
- Do the PSC officer meet the qualification requirements of the III Code?

Coastal State

- Charts & Hydrography
- Marpol Reception Facilities
- Aids to Navigation
- Search and Rescue

Visit to a Port Office

- Purpose is to verify that the IMO mandatory instruments and the policies of the central administration are understood and executed by the personnel at the field level activities of the administration.
- This is a logistical matter to consider for the audit. A suitable port office may be located a considerable distance from the national capitol and/or location of the headquarters of the maritime authority.

Report

- Ensure that the administrations central point of contact is provided with a copy of the final report at least 24 hours in advance of the closing meeting and given the opportunity to correct any technical errors, such as: spellings, titles, departments, etc.
- Findings may be amended based on additional information provided, misunderstanding and/or incorrect or incomplete information

Closing meeting

- Review the findings
- Areas of positive development
- Areas for further development.
 - Non-Conformities
 - Observations
- Outline the way ahead for the report and the responses by the Administration.

QUESTIONS?



The **COAST GUARD** Journal of Safety
& Security at Sea

PROCEEDINGS

of the Marine Safety & Security Council

Spring 2016

Safety Management Systems

*From the boardroom to the boiler room
there can be no weak links*

PROCEEDINGS



Spring 2016

Vol. 73, Number 1

Safety Management System Objectives

- 6 Safety Management Facilitates Safe Vessel Operation**
Vessel systems, crew, and operations.
by LCDR Aaron W. Demo
- 9 Safety Management Systems to Prevent Pollution from Ships**
Standard procedures protect the environment.
by LCDR Michael Lendvay
- 11 Dead Reckoning by Safety Management?**
Check your course.
by LCDR Corydon F. Heard IV

Safety Management Systems and the Outer Continental Shelf

- 15 Mitigating Risks on the Outer Continental Shelf**
Safety and environmental management systems in action.
by LT Jason Kling
- 18 Creating an Effective Safety and Environmental Management System for Offshore Oil and Gas Operations**
Adopting performance-based requirements into a hybrid regulatory regime.
by Mr. Stanislaus Kaczmarek, P.E.

Vessel Inspections

- 23 ISM Code and Vessel Safety Management Systems**
Reading between the lines to optimize compliance.
by Mr. Jason M. Yets
- 26 Strengthening Our Foundation**
Fostering an even more robust safety culture within the liquefied gas industry.
by CDR Jason Smith
- 31 Making the Safe, Safer**
Implementing safety management systems on domestic passenger vessels.
by Mr. Eric P. Christensen

USCG Mission Management System

- 35 One System**
Connecting SMS requirements to vessel operations.
by LT Josh Buck
- 38 The IMO Mandatory Member State Audit Program**
Appraising the flag.
by Mr. John J. Hannon

Training

- 41 Nothing to Fear**
Objective auditors drive quality throughout organizations.
by Captain Inderjit Arora
- 44 Audits vs. Inspections**
What's the difference?
by Mr. Anthony D. Morris

Investigations and Safety Management Systems

- 47 A Tale of Two Ships**
Examining SMS similarities, strengths, and weaknesses.
by Mr. Keith Fawcett
- 52 Suspension and Revocation for Safety Management System Violations**
Maintaining standards for competence and conduct essential to safety at sea.
by CDR Christopher F. Coutu
- 55 Putting People at the Center**
Integrating human factors into safety management systems.
by Ms. Dawn M. Gray

Lessons Learned

- 59 Deadly Fun**
Personal watercraft operating dangers.
by Ms. Sarah K. Webster

On Deck

- | | |
|--|-------------------------|
| 4 Assistant Commandant's Perspective
<i>by Rear Admiral Paul F. Thomas</i> | Nautical Queries |
| 5 Champion's Point of View
<i>by CAPT David M. Flaherty</i> | 64 Engineering |
| | 65 Deck |

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The IMO Mandatory Member State Audit Program

Appraising the flag.

by MR. JOHN J. HANNON
*Office of Commercial Vessel Compliance
Domestic Vessel Compliance Division
U.S. Coast Guard*

On January 1, 2016, the International Maritime Organization (IMO) implemented a mandatory system of audits for its 170 member states to verify the degree to which each member state effectively implements the mandatory IMO instruments to which it is signatory.¹ This mandatory program follows a successful voluntary program that ran from 2006 to 2015, in which the United States and approximately 70 other member states participated. Going forward with the mandatory system, experienced government maritime authority personnel from the IMO member states will conduct these mandatory audits, and the London, U.K., International Maritime Organization staff will support these volunteer auditors to ensure audit program continuity and consistency.

The audits will highlight areas where IMO member states demonstrate exceptional competence in implementing the IMO instruments and note areas where further development is needed to achieve full, effective implementation. The member states that did not participate in the voluntary program are first in line to be audited, followed by those that participated in the voluntary audits.²

Triple I

The audit standard comes from the International Maritime Organization Code for the Implementation of IMO Instruments (referred to as the “triple I” or “III” Code).³ As such, the audits focus on maritime safety and environmental protection programs; maritime security programs aren’t included in the audit scheme.

Each member state will have access to a summary of the audit findings, including any observations and nonconformances, but without attribution to the member states involved. The full audit report will only be available to the

auditors and the audited member state unless the member state voluntarily elects to make the report public. For example, the U.S., among many other nations, has chosen to make public the full IMO voluntary audit report.

The member state must submit a corrective action plan to the International Maritime Organization for all nonconformances in the audit report, but the IMO won’t make those corrective actions available to other member states.

The International Maritime Organization subcommittee for Implementation of Mandatory IMO Instruments (also known as the III subcommittee) has a standing work group that annually evaluates the findings to examine areas where the IMO could improve instrument implementation. The III subcommittee may make recommendations to the parent IMO committees for additions, deletions, or amendments to one or more of the IMO mandatory instruments if the audit findings reveal that some provision has proven problematic when it comes to effective implementation.

The main areas of the audit are:

- common areas,
- flag states,
- port states, and
- coastal states.

The applicability of these sections varies from country to country, depending on the geographical location of the member state and organization. For example, some IMO member states are landlocked, with no sea ports or coastline whatsoever. However, these member states register ships under their flag, and therefore, have responsibility to implement the IMO instruments that apply to those ships. So, in such an instance, the audit would omit the port state and



coastal state areas, focusing only on the common and flag state areas.

Common Areas

As the name implies, “common area” requirements apply to all member states, regardless of location and fleet composition. The focus is on organization, resources, and planning to ensure that international obligations and responsibilities as a flag, port, and coastal state are met. The III Code notes that each state should also monitor and assess effective implementation and enforcement for relevant international mandatory instruments, and should continuously review its strategy to maintain and improve overall organizational performance and capability as a flag, port, and coastal state.

An example of a common area for all member states is enacting national laws and regulations. Every IMO member state must give force to the mandatory IMO instruments to which it is signatory via its national laws, regulations, policy, and procedures. Depending on the legislative and administrative structure of each member state, this can be a protracted process. Maritime authorities within each nation must devote time and resources to accomplishing this task, and, in many instances, they may be in competition with other pressing issues before their national governments and legislative bodies.

Further, the volume of new International Maritime Organization regulations has, in some instances, outpaced the ability of some member states to enact national laws before the IMO mandatory instrument went into force. For example, the voluntary audits revealed numerous instances where member states implemented International Maritime Organization regulations via the rules of their recognized organizations (class societies, in most cases), but still lacked corresponding national laws.

This could put the recognized organizations in a difficult situation, inasmuch as they act as agents of national governments to grant or deny international certificates the International Maritime Organization regulations require. Additionally, even though maritime administrations can’t control the priorities of their national legislative bodies, the International Maritime Organization views implementing its instruments as a national responsibility—not just the function of an isolated entity within a government.



Captain Lonnie Harrison (6th from the left), USCG, and his team of IMO auditors (4th and 8th from the left) pause during a voluntary IMO member state audit of Ireland. U.S. Coast Guard photo courtesy of CAPT Lonnie Harrison.

Flag State

The very heart of the IMO audit is the member state’s responsibility to ensure that the ships that fly its flag are safe and environmentally compliant. All other International Maritime Organization regulations spring from this basic principle. So even when inspection functions are delegated to third-party organizations, the ultimate responsibility to verify compliance with the IMO instruments remains with the member state.

That said, the III Code allows delegating inspection and survey functions to recognized organizations, and most IMO member states do rely on recognized organizations to provide the global reach necessary to carry out all of the inspections and surveys IMO regulations require. To ensure that these third parties meet high standards, the International Maritime Organization recently created a code for recognized organizations, and each member state must verify their recognized organizations meet code requirements.⁴

The U.S. delegates various inspection activities to a variety of recognized organizations, primarily International Association of Classification Societies member classification societies. The Coast Guard is tasked with fulfilling its duties for oversight under the IMO instrument, and has fully adopted the IMO framework in the recognized organizations code as the model for its oversight program.

Port State

These are the activities related to control of vessels not flagged under the member state that are in the ports or waters of the member state. As noted in the flag state discussion, the primary responsibility to verify that a ship is in compliance with the IMO regulations lies with the flag state. However, port states are allowed to verify that ships arriving in their ports and waters are in compliance.

The International Maritime Organization has established guidelines for port state control; the IMO auditors will verify that member states are operating their port state control program in accordance with those guidelines. Also, this area of the audit includes the responsibility of the port state to prevent pollution by providing facilities for accepting and properly disposing of oil, sewage, garbage, and other waste from the ships that call in their ports.

The Coast Guard conducts port state control examinations for foreign vessels visiting the U.S. using a well-defined system that prioritizes examinations based on a variety of factors. The Coast Guard publishes an annual report that summarizes the results of these examinations, including by flag.⁵

Coastal State

These are the areas where member states provide for the safety of ships and persons on or adjacent to their coastline. This includes, among other things:

- search and rescue capability,
- aids to navigation,
- charting/hydrography for the coastal waters of the member state.

Depending on the geography of the member state, the need for capability in this area varies greatly. The U.S. has significant resources and capability in all these areas, due to its extensive coastline.

Looking Ahead

There can be an unfortunate negative connotation associated with any audit program, and some may perceive that the IMO member state audit program is simply intended to criticize member states that lack the resources to perform

at a level comparable to a developed nation such as the U.S. The proper view of the audit system is that the findings of the audit will assist the member state by identifying areas where improvement is needed. Conversely, for those member states the audit identifies as exceptional performers in certain areas, the audit system may provide a source for other member states to learn from best practices.

The International Maritime Organization audits are unique because they're carried out by member state government personnel who are themselves active with implementing the IMO instruments for their own member state. In this sense, the audit is a form of shared capacity among IMO member states and a peer review that can provide perspective immensely helpful to the member state being audited. When viewed from this perspective, it is a positive move toward more consistent and effective international implementation for the International Maritime Organization mandatory instruments, which benefits all.

About the author:

Mr. Hannon has served with the Coast Guard for 38 years. He was a marine inspector as a Coast Guard officer on active and reserve duty. As a civilian employee at Coast Guard headquarters, he develops regulations, policy, and procedures for inspection and certification of U.S.-flagged commercial and military sealift vessels. He is a U.S. delegate to the IMO III subcommittee, a member of the IMO audit scheme work group, and is an IMO lead auditor.

Endnotes:

- ¹ IMO Res. A.1067(28) on the Framework and Procedures for the IMO Member State Audit Scheme, December 13, 2013.
- ² IMO Res. A.1068(28) on the Transition from the Voluntary IMO Member State Audit Scheme to the IMO Member State Audit Scheme, December 13, 2013.
- ³ IMO Res. A.1070(28) on the IMO Instruments Implementation Code (III Code), December 13, 2013.
- ⁴ The III Code specifies "The flag state shall establish or participate in an oversight program with adequate resources for monitoring of, and communication with, its recognized organization(s) in order to ensure that its international obligations are fully met."
- ⁵ U.S. Coast Guard, Port State Control in the United States, 2014 Annual Report.





02

SESSION 3

14:30-16:00

Sasakawa Auditorium

HAN-SEON PARK

Research Fellow, Korea Maritime Institute



Dr Han-Seon Park is a research fellow of the Maritime Safety Department in the Maritime Industry and Safety Division of the Korea Maritime Institute (KMI). He was a former general manager and head of the Green Growth Office at the Korea Ship Safety Technology Authority of the Republic of Korea, where worked as a principal ship surveyor for about 17 years after working for Hanjin Shipping Co. Ltd. for four years as the second engineer onboard.

Since 2001, Dr Park has been a member of Korean delegations to many international meetings such as the 46th–53rd and 60th–69th MEPC, the 8th, 9th, and 14th BLG, the Council and Assembly of IMO, and the COP 16th–20th of the UNFCCC. Additionally, he has lectured at KMOU and Sungkyunkwan University in Seoul about green ship technology as well as maritime safety and marine pollution-prevention technology.

Dr Park has often worked as a consultant and advisor for IMO capacity-building projects against climate change and partnerships for East Asian countries. From 2006 to 2007, he carried out international cooperation projects related to capacity building to enhance ship safety in Algeria, and from 2012 to 2013, he helped build the capacities of East Asian Countries to address GHG emissions from ships by IMO-KOICA. Dr. Park also worked for Indonesia from 2013 to 2015 in capacity-building projects funded by KOICA for ship safety and the marine environment.

He graduated in 2009 from the World Maritime University (maritime safety environment administration, M.Sc.) in Sweden after graduating in 1995 from the Korea Maritime and Oceans University (marine engineering) and the Graduate School of KMOU (marine engineering) in 2001. He graduated from the Graduate School of KMOU (Ph.D. in maritime law and policy) in 2014.

A Capacity Building Programme in relation to IMO's IMSAS



Dr. Park. Han-Seon

Research Fellow / Maritime Safety Division

- Korea Maritime Institute -



Contents

1. A Capacity – Building Programme (CBP) in Maritime Sector

2. Implementation in terms of IMO mandatory Instruments

3. A CBP of IMSAS in terms of Marine Environment

4. A CBP in terms of Maritime Safety and Security

5. Conclusion

1. A Capacity-Building Program in Maritime Sector

A Capacity-Building in Maritime Sector (IMO SP)

1. UN 2030 Agenda for Sustainable Development
 - 17 Sustainable Development Goals(SDGs)
 - A particular connection to maritime transportation (G2, G5, G7, G9, G13, G14)



Page § 1

1. A Capacity-Building Program in Maritime Sector

A Capacity-Building in Maritime Sector (IMO SP)

- ❖ Trends, Developments and Challenges facing the IMO in the 2018-2023 period
 - A particular connection to maritime transportation
 - * G2(End hunger, achieve food security and improved nutrition and promote sustainable agriculture
 - * G7(Ensure access to affordable, reliable, sustainable and modern energy for all : the continued efficient functioning of the maritime sector can trade flow freely, and food and energy be delivered cost-effectively across the globe; maritime transportation plays a central role, in particular for Small Island Developing States
 - * G5(Achieve gender equality ad empower all woman and girls : Shipping has traditionally been a male-dominated industry. IMO is making a concerted effort to empower women to be more broadly represented within the maritime community
 - * G9(Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation: This is central to the effective functioning of the whole transportation sector and therefore a major driver for the delivery of other goals; focus on regional and transborder infrastructure to support economic development and human well-being, is central to ensure the best use of financial resources and seek synergies.

Source : C 116/4/1, Strategy, Planning and Reform(6 May 2016)

Page § 2

1. A Capacity-Building Program in Maritime Sector

A Capacity-Building in Maritime Sector (IMO SP)

* G13(Take urgent action to combat climate change and its impacts :

Following from the Paris Agreement, through which 195 Parties to the United Nations Framework Convention on Climate Change (UNFCCC) have pledged to curb emissions, strengthen resilience and agreed to take common climate action, there is an expectation that maritime transportation considers which further measures to take from an industry that is truly global, and therefore not covered by national measures

** G14(Conserve and sustainably use the oceans, seas and marine resources for sustainable development. Oceans, seas and coastal areas from an integrated and essential component of the Earth's ecosystem and are critical to sustainable development. They cover more than two-thirds of the earth's surface and contain 97% of the planet's water. As users of the oceans and seas, the maritime community has a central role to play in ensuring among other things good governance and adequate measures to reduce the negative anthropogenic impacts on the marine environment*

Source : C 116/4/1, Strategy, Planning and Reform(6 May 2016)

Page 3

1. A Capacity-Building Program in Maritime Sector

A Capacity-Building in Maritime Sector (WMU SP)

❖ A particular connection to WMU related to UN 2030 SDGs Agenda

- * In an environmentally responsible way, to safe, secure and efficient shipping on clean oceans in support of the maritime industry as an engine of world trade and as a leader in sustainable development
- * G4(Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all)
- * G5(Achieve gender equality ad empower all woman and girls)
- * G7(Ensure access to affordable, reliable, sustainable and modern energy for all :
- * G9(Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- * G13(Take urgent action to combat climate change and its impacts)
- * G14(Conserve and sustainably use the oceans, seas and marine resources for sustainable development)
- * G17(Strengthen the means of implementation and revitalize the global partnership for sustainable development)

Source : <http://www.wmu.se/news/wmu-and-un-2030-sustainable-development-agenda>

Page 4

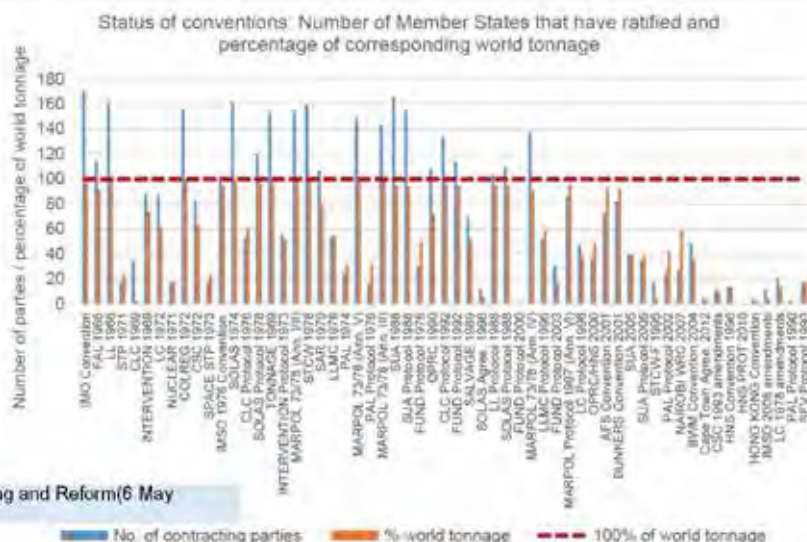
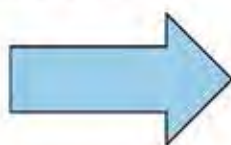


2. Implementation in terms of IMO mandatory Instruments

IMO mandatory instruments

- ❖ Mandatory IMO Instruments (*SOLAS 1974; MARPOL Annexes; LL 66; COLREG 1972, Tonnage 1969 and STCW 1978 etc.*

- ❖ Status of Conventions (*IMO, 2916a*)

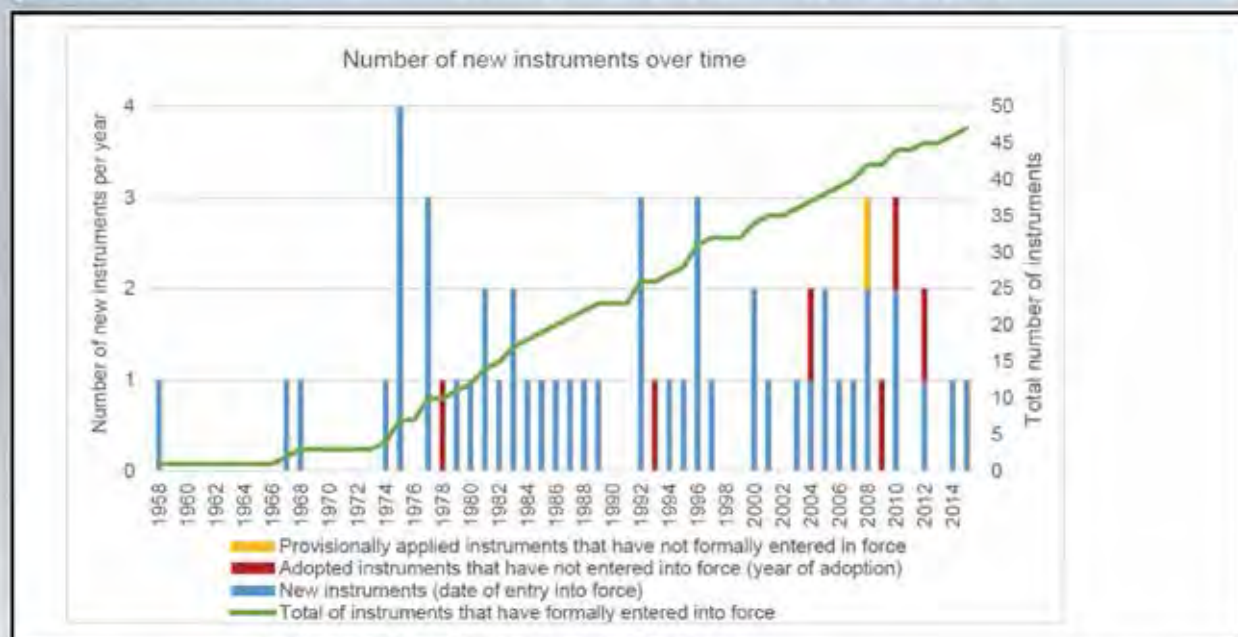


Page 5



2. Implementation in terms of IMO mandatory Instruments

IMO mandatory instruments (Instruments over time, IMO, 2016a)



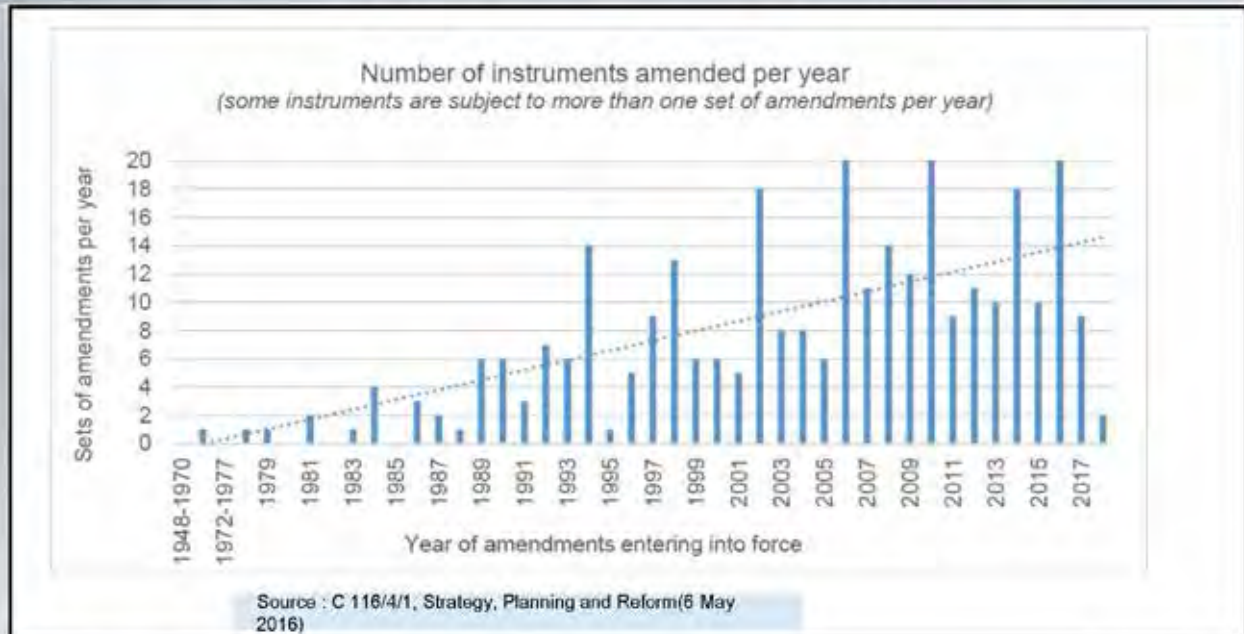
Source : C 116/4/1, Strategy, Planning and Reform(6 May 2016)

Page 6



2. Implementation in terms of IMO mandatory Instruments

IMO instruments (Number of instruments Amended per Year, IMO 2016b)



Page 7



3. A CBP of IMSAS in terms of Marine Environment

IMO MARPOL Annex VI - Chapter 4, Regulation 23

- ❖ Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships
 - *Administration shall, in co-operation with the Organization and other international bodies, promote and provide, as appropriate, support directly or through the Organization to States, especially developing States, that request technical assistance.*
 - *The Administration of a Party shall co-operate actively with other Parties, subject to its national laws, regulations and policies, to promote the development and transfer of technology and exchange of information to States which request technical assistance, particularly developing States, in respect of the implementation of measures to fulfil the requirements of chapter 4 of this annex, in particular regulations 19.4 to 19.6.*



Resolution MEPC.229(65) "Promotion of Technical co-operation and Transfer of Technology relating to the improvement of Energy Efficiency of Ships" (17 May 2013)

Source : MARPOL 73/78 Annex VI, Chapter 4 Reg. 23/ IMO Resolution MEPC.229(65)

Page 8



3. A CBP of IMSAS in terms of Marine Environment

IMO MARPOL Annex VI - Chapter 4, Regulation 23



BEING COGNIZANT ALSO of the principles enshrined in the UNFCCC and its Kyoto Protocol including the principle of common but differentiated responsibilities and respective capabilities,

BEING AWARE that Parties to MARPOL Annex VI are expected to give full and complete effect to chapter 4 of MARPOL Annex VI,

1 REQUESTS the Organization, through its various programmes, to provide technical assistance to Member States to enable cooperation in the transfer of energy efficient technologies to developing countries in particular; and further assist in the sourcing of funding for capacity-building and support to States, in particular developing States, which have requested technology transfer;

2 INVITES international and regional organizations, non-governmental organizations and the industry to contribute in any manner possible and as appropriate to enhancing the effective implementation of chapter 4 of MARPOL Annex VI;

Source : MARPOL 73/78 Annex VI, Chapter 4 Reg. 23/ IMO Resolution MEPC.229(65)

Page 9



3. A CBP of IMSAS in terms of Marine Environment

IMO MARPOL Annex VI - Chapter 4, Regulation 23



3 DECIDES to establish, with full stakeholder participation, an Ad hoc Expert Working Group on facilitation of Transfer of Technology for ships (AHEWG-TT) with a mandate to:

- .1 assess the potential implications and impacts of the implementation of the regulations in chapter 4 of MARPOL Annex VI, in particular, on developing States, as a means to identify their technology transfer and financial needs, if any;

6 URGES also Member States with an ability to do so, and subject to their respective national laws, regulations and policies, to promote the provision directly, or through the Organization, of support especially to developing States and including, but not limited with regard to:

- .1 transfer of energy efficiency technologies for ships;
- .2 research and development for the improvement of energy efficiency of ships;
- .3 training of personnel, for the effective implementation and enforcement of the regulations in chapter 4 of MARPOL Annex VI; and
- .4 the exchange of information and technical co-operation relating to the improvement of energy efficiency for ships;

Source : MARPOL 73/78 Annex VI, Chapter 4 Reg. 23/ IMO Resolution MEPC.229(65)

Page 10



3. A CBP of IMSAS in terms of Marine Environment

IMO MARPOL Annex VI - Chapter 4, Regulation 23

❖ 7 INVITES the Secretary-General of the Organization to make adequate provisions in its integrated Technical Co-operation Programme (ITCP) related to the effective implementation and enforcement of the requirements of chapter 4 of MARPOL Annex VI by developing countries, particularly the Least Developed Countries (LDCs) and Small Islands Developing States (SIDS); and

8 AGREES to keep under review the implementation of measures for the promotion of technical cooperation related to the energy efficiency of ships, as set out in this resolution.



Source : IMO Resolution MEPC.229(65) /IMO Dr. Edmund Hughes ICAO/IMO Side Event UNFCCC COP 21, 2 December 2015

Page 11



3. A CBP of IMSAS in terms of Marine Environment

Technical Cooperation and Capacity-Building Programme(CBP)

- ❖ Integrated Technical Cooperation Program
 - Includes funding for the training and capacity-building activities in ship energy efficiency
- ❖ Major Projects on Capacity-Building
 - IMO-KOICA Project on "Building Capacities in East Asian Countries to Address GHG Emissions from Ships" (2011)
 - * Three sub-regional workshops, Three Countries, 2 day workshop (5 to 7 Maritime Administrations, 50 in country participants.
- ❖ IMO-Singapore Future Ready shipping conference on Maritime Technology Transfer and Capacity Building, September 2015
- ❖ Global Maritime Energy Efficiency Partnerships Project(GloMEEP Project)
 - GEF-UNDP-IMO partnership to support increased uptake and implementation of energy efficiency measures for shipping
 - Focus in particular on building capacity to implement technical and operational measures in developing countries, where shipping is increasingly concentrated.(US\$ 13.7million)

Source : IMO Resolution MEPC.229(65) /IMO Dr. Edmund Hughes ICAO/IMO Side Event UNFCCC COP 21, 2 December 2015

Page 12



3. A CBP of IMSAS in terms of Marine Environment

Technical Cooperation and Capacity-Building Programme(CBP)

- ❖ Integrated Technical Cooperation Program
 - Includes funding for the training and capacity-building activities in ship energy efficiency
- ❖ **Major Projects on Capacity-Building**
 - IMO-KOICA Project on "Building Capacities in East Asian Countries to Address GHG Emissions from Ships" (2011) (US\$ 700,000 KOICA + US\$ 400,000 IMO = US\$ 1.1million)
 - * Three sub-regional workshops, Three Countries, 2 day workshop (5 to 7 Maritime Administrations, 50 in country participants).



Awareness
Raising Materials

Model Course on
Ship Operation
(by WMU)

Train-the-trainer
Tools

Training Package
on Ship Design

Training Package
on Ship Operation



Source : IMO Resolution MEPC.229(65) /IMO Dr. Edmund Hughes ICAO/IMO Side Event UNFCCC COP 21, 2 December 2015

Page 13



3. A CBP of IMSAS in terms of Marine Environment

Technical Cooperation and Capacity-Building Programme(CBP)

- ❖ IMO-Singapore Future Ready shipping conference on Maritime Technology Transfer and
 1. Legal, policy and institutional reforms;
 2. Awareness raising and capacity-building activities; and
 3. Establishment of public-private partnerships to encourage technology transfer.



- ❖ **Global Maritime Energy Efficiency Partnerships Project(GloMEEP Project)**
 - GEF-UNDP-IMO partnership to support increased uptake and implementation of energy efficiency measures for shipping
 - Focus in particular on building capacity to implement technical and operational measures in developing countries, where shipping is increasingly concentrated.(US\$ 13.7million)
 - Legal, policy and institutional reforms, Awareness raising and capacity-building activities
 - IMO Train the Trainer Course on Energy Efficient Ship Operation
 - Module 1: Climate change and the shipping response
 - Module 2: IMO energy efficiency regulations and related guidelines
 - Module 3: From management to operation
 - Module 4: Ship board energy management
 - Module 5: Ship port interface and energy efficiency
 - Module 6: Energy management plans and systems.



Source : <http://www.imo.org/en/MediaCentre/PressBriefings/Pages/15-glomeet-trainthetrainer.aspx> , 27 May 2016

Page 14



4. A CBP of IMSAS in terms of Maritime Safety and Security

IMO Maritime Security Capacity Building

- ❖ Security Council statement highlights IMO capacity-building work in Gulf of Guinea
- *The IMO West and Central Africa Maritime Security Trust Fund and its efforts to help build maritime security capacity in West and Central Africa.*
- ❖ The European Union is funding a €1.2 million grant contract, signed between IMO and the African, Caribbean and Pacific Group of States (ACP) to support training and capacity-building activities aimed at enhancing flag State implementation and port State control in Western and Central Africa, with a view to upgrading the region's maritime administration and preparing its States for the mandatory IMO audit scheme.
- ❖ It is anticipated that the project will lead to the maritime Administrations being audited in accordance with the IMO Audit Scheme, which is expected to become mandatory in 2016 following the adoption and entry into force of amendments to the relevant IMO instruments. The focus of the capacity-building activities will be on compliance with the IMO instrument implementation Code (III Code)

Source : <http://www.imo.org/en/MediaCentre/PressBriefings/Pages/07-EU-ACP-IMO.aspx#.V1Fa2a6weUk> (16 May 2016)



Page 15



4. A CBP of IMSAS in terms of Maritime Safety and Security

IMO Maritime Piracy Capacity Building

- ❖ IMO sings strategic counter-piracy capacity building partnerships with UN agencies and EU
- ❖ Djibouti Code of conduct background
 - The Djibouti Code of Conduct was signed on 29 January 2009 by representatives of Djibouti, Ethiopia, Kenya, Madagascar, Maldives, Seychelles, Somalia, the United Republic of Tanzania and Yemen. With the signing by South Africa on 15 May the number of signatures was brought to 19 States out of the 21 eligible to sign. (The 19 signatory States are: the Comoros, Djibouti, Egypt, Eritrea, Ethiopia, Jordan, Kenya, Madagascar, Maldives, Mauritius, Oman, Saudi Arabia, Seychelles, Somalia, South Africa, the Sudan, the United Arab Emirates, the United Republic of Tanzania and Yemen).
 - The implementation plan for the Djibouti Code of Conduct is being funded primarily through the IMO Djibouti Code Trust Fund, which received generous early donations from France, Japan, Netherlands, Norway and the Republic of Korea, and more recent donations from the Marshall Islands and Saudi Arabia

Source : <http://www.imo.org/en/MediaCentre/PressBriefings/Pages/07-EU-ACP-IMO.aspx#.V1Fa2a6weUk> (16 May 2016)

Page 16



4. A CBP of IMSAS in terms of Maritime Safety and Security

Enhancing Ship Safety in Algeria (KOICA, Oct 2008)

- ❖ Period and Budget of the project
 - Period : Jun. 2007 – Oct. 2008(17 Months)
 - Budget : 471,511 USD (KOICA)
- ❖ Scope of the Project and implementation
 - Improving the basic legal system for ship safety
 - Enhancing Algerian technology in ship safety management, inspection, design, and construction
 - Establish gross tonnage measurement standard for ship registration
 - Prepare checklist for international convention and domestic inspection
 - Provide programs and equipment for ship inspection



Source : Enhancing Ship Safety in Algeria KOICA (Oct 2008)

Page 5♣ 17



4. A CBP of IMSAS in terms of Maritime Safety and Security

Capacity-Building for ship safety and marine environment protection in Indonesia

- ❖ Period and Budget of the project
 - Period : Nov. 2013 – Dec. 2015(24 Months)
 - Budget : 1,300,000 USD (KOICA)
- ❖ Scope of the Project and implementation
 - Capacity-Building for ship safety and maritime environment protection in Indonesia
 - Enhancing the capacity of governmental officers in terms of the ship survey on, in particular, Non-SOLAS vessels, Securing the maritime safety in the Indonesian waters in terms of improving shipbuilding technology
 - GHG emission from ships and develop proper policy



Source : Report of dispatch activities in Indonesia KOICA (April 2015)

Page 5♣ 18



5. Conclusion

- ❖ Sustainable Development of Capacity-Building Program relating to UN agenda (17 SDGs)
 - Means of Implementation(MOI) of IMO & WMU
 - IMO Strategy and Planning and Trends, Developments and Challenges facing the IMO
- ❖ The role and responsibilities of IMO Member States
 - Implementation of IMO mandatory Instruments
 - A sustainable development of capacity-building program for IMSAS (Marine Environment-Climate Change & Maritime Safety and Security-Piracy)
- ❖ The sustainable growth of WMU
 - The international activities of WMU alumni
 - International networking
 - Global Common Goal

Page 19



SESSION 3

14:30-16:00

Sasakawa Auditorium

CHRISTINE BERG

Head of Unit, Maritime Safety, DG MOVE, European Commission



Ms Berg heads the Maritime Safety Unit of the Directorate General for Mobility and Transport. The unit strives to develop and implement policies for the promotion of quality shipping and for the prevention of accidents and pollution caused by ships. The unit deals with all aspects of ships' safety, safety of passengers and crews, the training and certification of seafarers, and working conditions on board ships. The unit promotes the technological development of vessel traffic monitoring. It looks after flag and port State responsibilities, and the role of classification societies. The unit is supported by the European Maritime Safety Agency and coordinates the Commission's relations with the International Maritime Organization.

Ms Berg headed the office of the Director General for Transport and Energy from 2006 to 2008. Thereafter she managed units in DG Energy and DG Enterprise and Industry.

Ms Berg joined the European Commission in 1996 after having worked as a Management Consultant with an international consultancy. She graduated in business administration and holds a doctoral degree in economic and social sciences.



IMO Auditing Schemes: Current Practices and Future Challenges

European views on developments and challenges

KMI – WMU Seminar Malmö 16 June 2016

Dr Christine Berg

European Commission DG MOVE



Outline

Audits/assessments/inspections

The EU approach

EU not a flag State

Continuous Improvement

IMO Audit Scheme

- **Audit Developments**
- **Audit Challenges**
- **Audit positives**

Flag State Performance



Audits/assessments/inspections

Aim for a uniform practice as that is the way to ensure same competitive advantages and performances, irrespective of flag



The EU approach

20 years of experience with audits in EC

Today - EMSA support

The Voluntary IMO Audit Scheme was made mandatory for EU MS through the EU Flag State Directive (2009)





The EU approach

The main difference between EU and IMO

- **The EU MS (in Council) and the European Parliament adopt EU legislation that implements IMO instruments**
- **As the rules become law they are enforceable before the European Court of Justice with possible financial sanctions as a result**



The EU approach

- *Harmonisation - discharge international obligations in an effective and coordinated way*
- *More uniform application*
- *Collective experience and added value*
- *Together follow the work on the International Scene – IMO, ILO*





EU not a flag State

The European Commission's role within the EU is as guardian of the Treaty

But:

The European Commission is not only about enforcement



Continuous Improvement

Maritime Safety is much about continuous improvement!

With the support of EMSA the Commission is analysing the outcome of all 'audits' performed





IMO Audit Scheme

Transparency plays an important part of ensuring quality shipping



Audit Developments

Scope of audit

The delegation to RO's

The size and type of the fleet

How audit reports/result are made available

How any follow-up action are recorded and made available





Audit Challenges

- **Methodology and consistency**
- **Treat 'like-like'; training and updating of knowledge of auditors**
- **How to establish 'findings' consistently and how to present them**
- **How to use 'findings' in continuous improvement**



Audit Positives

- **carrying out analysis/assessment of findings**
- **de-brief among 'auditors'**
- **use 'peer review'**





Flag State Performance

New (not only PSC) parameters?



Thank you for this excellent initiative and for this opportunity to share some thoughts based on our experience



DONG-WOO HA

Chaired Research Fellow, Korea Maritime Institute



Dr Dong-Woo Ha, currently a Chaired Research Fellow of the Korea Maritime Institute (KMI), plays an advisory role in various international cooperation matters.

From 1999 to 2014, Dr Ha served as the director of the Transport Division of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), leading a multidisciplinary team of experts undertaking projects and activities for the development of transport and logistics in the Asia-Pacific Region, including the Asian Highway and Trans-Asian Railway networks, shipping and ports, transport facilitation, and logistics. He recently focused on the development of intermodal interfaces such as inland container depots (ICDs) and dry ports not only as an integral part of an international integrated intermodal transport and logistics system but also as a focus for economic development where various economic and business activities are clustered. His work also covered the social and environmental aspects of transport including road safety, inclusive and sustainable transport development, and public-private partnerships for infrastructure development. He led many studies including an ESCAP theme study in 2014 on “Regional Connectivity for Shared Prosperity.”

Prior to his career with ESCAP, Dr Ha was a director and senior research fellow of KMI and actively involved in consulting with government and businesses in the areas of shipping economics and port logistics.

In 1994, he earned his Ph.D. degree in business administration (transport and logistics) from the University of Tennessee, Knoxville, USA, and a MBA in 1976 and BBA in 1974 from Seoul National University, Korea.

DANIEL SEONG-HYEOK MOON

**Professor & INMARSAT Chair, Head of Shipping Management & Logistics,
and Port Management, World Maritime University**



Ph.D. in Port Economics, Cardiff University

Dr Moon is currently the INMARSAT CHAIR Professor of World Maritime University. Dr Moon earned his Ph.D. degree in Port Economics from Cardiff University, UK. His area of teaching and research has been closely related to ports in terms of management, operation and logistics. He also has a specialty in Maritime Education & Training (MET) based upon his experiences in educating students at Korea Maritime University (KMU) where he has worked for more than 25 years. He has a qualified First Class Navigation Certificate (non-limited) and has been aboard ship more than 10 years including as a chief mate at HMM and a captain at KMU Training Ship. He has widely published articles and books that concern ports and MET.

He has been involved in many research projects for public organizations as well as private companies in terms of maritime and ports activities. He is a member of the Institute of Logistics and Transport, the Chartered Institute of Transport, and the International Association of Maritime Economists (IAME).

JENS-UWE SCHRÖDER-HINRICHS

Professor & Nippon Foundation Chair, Head, Maritime Safety and Environmental Administration, World Maritime University



Jens-Uwe Schröder-Hinrichs graduated from the University of Rostock, Germany with a M.Sc. equivalent degree in Maritime Transport Engineering (Dipl.-Ing.) in 1995. In 2003 he completed his Ph.D. (Dr.-Ing.) in Safety Science at the University of Wuppertal, Germany with a thesis about causes of maritime casualties and underlying factors.

As a former seafarer, Dr Schröder-Hinrichs obtained practical experience on different operational levels – from AB apprentice to navigation officer – on board various ship types in world-wide trade. He holds an unlimited Master Mariner Licence (Kapitän AG). After finishing his seafaring career, he joined the classification society Germanischer Lloyd, working in the head office in Hamburg, Germany. He was engaged in ship safety tasks, as well as manning and qualification matters. He also became a consultant to various maritime administrations during his time at GL.

In October 2000 he joined the World Maritime University (WMU), Malmö, Sweden. Dr Schröder-Hinrichs currently holds a position as Professor. Since 2006, he is the Nippon Foundation Chair of Maritime Administration. In 2011, he was appointed Head of Maritime Safety and Environmental Administration (MSEA). In 2014 and 2015 he was also working as Acting Associate Academic Dean and was heading the accreditation of the universities' M.Sc. programmes.

As far as research activities are concerned, Dr Schröder-Hinrichs is the Head of the Maritime Risk and System Safety (MaRiSa) Research Group, a group which he set up in 2009. Dr. Schröder-Hinrichs is the Editor of the WMU Journal of Maritime Affairs which is jointly published with Springer Verlag. He is involved with the Journal since its beginning in 2002. He is also a Co-Editor of the WMU book series, WMU Studies in Maritime Affairs, jointly published with Springer Verlag.

Dr Schröder-Hinrichs is and was an advisor to maritime administrations on issues related to the implementation and enforcement of maritime safety regulations. He is an active lead auditor in the IMO Voluntary Member State Audit Scheme. In addition, Dr Schröder-Hinrichs is a member of the Nautical Institute (Member of the Council and of the Technical Committee) and the German Ship Master and Officer Association.

DONG-WOOK SONG

Professor & Republic of Korea Chair, World Maritime University



Ph.D. Maritime Policy and Management, University of Plymouth
M.Sc. International Shipping, University of Plymouth
BA (Hons), Shipping Management, Korea Maritime University

Dong-Wook Song is the Republic of Korea Chair and Professor of Maritime Logistics at World Maritime University, Sweden. Prior to the current post, he worked at Edinburgh Napier and Heriot-Watt University in the UK, and Hong Kong University. He holds a BA(Hons) with First Class in Shipping Management from Korea Maritime University, an M.Sc. in International Shipping and a Ph.D. in Maritime Policy and Management from the University of Plymouth, UK. He also attended an Industrial Economics Course at the London School of Economics.

Professor Song has received a number of academic awards including ‘The Maritime Policy and Management Award for the Best Paper’ at the International Association of Maritime Economists (IAME) Annual Conferences in 1999 and 2001; ‘The Best Paper Award’ at the Asian Association of Shipping and Logistics in 2008; and ‘The Best Paper of the Year 2009’ at the International Journal of Logistics: Research and Application. He is a Chartered Member of The Chartered Institute of Logistics and Transport (CILT), and has held a number of visiting posts – recent ones being at the University of Reading, UK; the University of the West Indies, Trinidad and Tobago; Nanyang Technological University, Singapore; and Shanghai Maritime University, China.

He is currently a Co-Editor and Associate Editor of two major research outlets in the field of ‘logistics and supply chain management’ and ‘maritime transport and logistics’ – Internal Journal of Logistics: Research and Applications and Maritime Policy and Management, and sits on editorial boards at known transport and logistics journals. He has worked as a consultant for a number of private and public organisations including the UN, OECD, ADB and World Bank. Professor Song has served the IAME as an elected Council Member since 2012, in addition to his previous three terms (2005-2010). A recent article in Transport Reviews (2013) shows that his works in port research are highly ranked – among the top listed over the last three decades (1980-2009). Another article in Maritime Policy and Management (2013) lists his two papers, published in 2003 and 2002, are among the top 30 most cited papers over the whole forty-year-history of the journal (1973-2013). His prolific-but-impact-bearing-refereed publications are a product from his keen interest in managerial and strategic aspects of global shipping, port and logistics.

