

## Appendix 3 – Example Lesson(s)

### Lesson 5 – Climate Change – Regulatory Impact

#### The development of regulation and political structures in the maritime industry

(8h presence / 1 of 5 ECTS)

#### 1. Learning Outcomes

Each learning outcome from this lesson are parts of achieving the main course learning outcomes of: 4, 9 and 13. The list is not exhaustive but provides a good basis for how to unfold the learning objectives.

At the end of this lesson the participants will be able to understand the impact of regulation on the operational performance of vessels and the expectations behind regulations. They shall be able to compare regional, global and self-regulation as possible tools. Eventually, they should be able to develop ideas on how to participate in the regulatory discourse and how to formulate proposals for improved regulation.

#### 2. Introduction

- a. Climate change – basic scientific facts and political discourse.
- b. From Kyoto to Paris.
- c. Review of maritime regulatory framework.
- d. Regulatory goals and pending changes in the maritime framework.
- e. Review status quo of emission from ships (IMO GHG studies and developments).

#### 3. Guiding ideas of the lesson

- a. the transmission from public discourse to regulatory change.
- b. which forces in the maritime industry took position in the political and societal discourse and to what result.
- c. how a variety of industry players position themselves in the regulatory environment.
- d. the operational impact of regulatory change.
- e. the commercial impact of regulation
- f. the importance of a level playing field in regulation
- g. how regulation is not static by highly dynamic
- h. how the regulatory process can be influenced and where the boundaries of such influence are.

#### 4. Module Content

Review of existing regulation and pending legislation and distinguish between short-term, medium-term and long-term measures. Discuss in detail:

- a. UN Sustainable Development Goals (i.e. #13).
- b. IMO Greenhouse gas strategy
- c. IMO DCS
- d. MARPOL
- e. EEDI
- f. SEEMP
- g. EEXI
- h. CII

Review regional regulation (i.e. EU et al.). Helpful is a comparison and sidestep to review regional CO2-regulation for the airline industry in Europe and the respective reactions, namely from China, the US and India.

Overview of pending regulation (IMO, regional).

Discussion of national and regional incentive schemes for green shipping to reduce CO2 output. Compare effects and impact of (positive) incentive schemes with (negative, restrictive) regulation.

Clearly distinguish between global (i.e. UNCCC, IMO) regulation and regional regulation (EU et.al.).

Draw a stakeholder map of the maritime industry and discuss different incentives to decarbonize between various stakeholders.

- a. Ship-owners
- b. Investors
- c. Banks
- d. Ship-managers
- e. Ship builders (yards)
- f. Suppliers
- g. Industry lobby
- h. NGOs
- i. Governments
- j. Oil majors / oil supplying countries
- k. Other energy suppliers
- l. Small island developing states
- m. Etc.

Extend discussion to the impact of decarbonization on the financial stakeholders. Take particularly into account institutional investors (Sovereign Wealth Funds, strategies from Private Equity like Black Rock et.al.) and banks. Discuss impact and influence of the Poseidon Principles.

## 5. Teaching Methods

The methods of this lesson are lectures and group work.

Most importantly, participants need to bring their own operational and possibly managerial experience to the group and class discussions.

## Socratic Questioning.

**These questions are provided as an appetizer for the students regarding this lesson. The answers should not be given to the students, but they should be encouraged to find themselves. The question can be used both for preparation for the lesson and reflection afterwards.**

- *What are the reasons for studying data and data processing methods when pursuing a more efficient and green way to operate vessels?*
- *Does the use of KPI's always lead to better results?*
- *What drives innovation in the green transition in shipping? (Industry, legislators or a third party?)*
- *Is greenwashing<sup>1</sup> a problem within the maritime sector?*

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<sup>1</sup> **Greenwashing** (a [compound word](#) modelled on "[whitewash](#)"), also called "**green sheen**",<sup>[1][2]</sup> is a form of marketing [spin](#) in which [green PR](#) (green values) and [green marketing](#) are deceptively used to persuade the public that an organization's products, aims and policies are [environmentally friendly](#). (wikipedia)