Appendix 1 for “The Potential and Limits of Environmental Disclosure Regulation: A Global Value Chain Perspective Applied to Tanker Shipping” by René Taudal Poulsen, Stefano Ponte, Judith van Leeuwen, and Nishatabbas Rehmatulla. Published in Global Environmental Politics (2021) 21 (2): 99–120. https://doi.org/10.1162/glep_a_00586

Interviewees

<table>
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Interview-guide for chartering, operations and technical managers in tanker shipping companies

June-August 2018

In my e-mail approach to the interviewees, I explain my interest in the potential for reduction of GHG emissions from shipping. I explain that my research concerns the question of how shipping can achieve the GHG goals agreed at the IMO MEPC meeting in April. I reveal my two key questions below (but not more than that):

1. What is the potential for time savings in tanker operations (in port and at anchorage)? Could reduce turn-around time in port and reduced time at anchorage enable ships to slow-steam further and achieve emission abatement?
2. What is your view on the GHG data collection systems from the EU (MRV) and the IMO (DCS)?

The interviews will be semi-structured (and ideally take at least one hour). Preferably I will target heads of operations and chartering departments in tanker companies (product, chemical, LPG, and LNG). The interviews will fall in two parts:

1. Time savings potential, because this question is focused on the shipping companies’ own operations.
2. The MRV and DCS discussions, because they are both concerned with shipping companies’ own operations and environmental regulation. I expect the latter aspect to be more controversial in the view of the interviewees than the discussion on time savings.

The overall structure of the interviews will be the following:

1. Start with open-ended questions: Please describe what you do. How you do it? How does regulation affect your company?
2. Gradually follow up with more testing questions: Did you consider the following aspects and factors? If you see an improvement potential, why has this potential not already been achieved? How can shipping achieve significant GHG emission reductions?
3. Ending with clarifying questions about the business model of the shipping company: What are your competitiveness factors? (In order to supplement the information which is available in company annual reports and on corporate website).
PART 1 – POTENTIAL FOR TIME SAVINGS

Do you see a potential for time savings in the operation of tankers, which could allow for service speed reductions?

- If yes, where?
  - How large is the potential?
  - How to achieve it?
  - Why has it not been achieved already?
- If not, why not?

Port turn-around time

- What are the factors, which influence a ship’s turn-around-time in port?
  - Do you see variation in the duration of port calls?
    - If yes, what in your experience is the shortest and what is the longest?
    - What causes such variation?
- What are the main activities during a tanker’s port call?
  - Could you please describe the different activities and processes that take place during a tanker’s port call?
    - How long time does each activity take?
      - Which of these activities is the crew or the shipping company in control of?
      - How do bunkering, provisioning, garbage and sludge handling, crew changes or other activities influence the time spent in port?
        - Would it be possible to save time on any of the activities?
          - Which and how?
          - How can achieve such time saving measures?
        - How do customs clearance, immigration, signing of bills of lading etc. influence the time spent in port?
- Port turn-around time saving measures
  - What can you, in the chartering (or operations) department of a tanker shipping company do to reduce port turn-around time?
    - Do you have experiences with this?
  - What can seafarers onboard the ships do to reduce time in port?
  - Who are the other key stakeholders, who can ensure short turn-around time in port?

Time spent at anchorage

- Do any of your ships spend time in laden condition at anchorages, while waiting for berth?
  - If yes:
    - Where?
• Is there any difference in the waiting time between different geographies, terminals or ports?
  o If yes, what causes this variation?

• For how long do the ships wait?

• Is waiting time at anchorage affected by the ship’s charter party? Or type of charter (voyage vs. time charter)?

• Does waiting time at anchorage affect your earnings in any way?
  • Under voyage charters?
    o When will you start earning demurrage?
    o Does demurrage rate differ from the voyage charter rate?
      ▪ If yes, how and why?
  • Under time charters?

• Can you minimize or avoid the waiting time?
  • Would you want to do that?
  • What would be required to minimize waiting time?

• **Virtual arrival schemes**
  o Do you use virtual arrival schemes in your company today?
    ▪ If yes, where and when?
      • Do you propose to charterers to use virtual arrival clauses to your voyage charterers?
    ▪ If not, why not?
      • Do you have experiences with virtual arrival schemes from the previous shipping companies that you worked in?
      • Would implementation of virtual arrival clauses not enable shipping to reduce its fuel consumption and achieve emission abatement?
  o Are you familiar with the BIMCO virtual arrival clause for voyage charters, which was developed in 2012?
    ▪ What is your view on the clause?
    ▪ Do you use it? Or offer your charterers to use?
      • If yes, who use it?
        o And how frequently is it used?
      • If not, why not?
  o Do you see a potential for implementation of virtual arrival schemes?
    ▪ If yes, what would it require?
    ▪ And who should be involved for it to succeed?
PART 2 – DATA SETS ON GHG EMISSIONS

Shipping company performance monitoring system

- How do you measure the fuel consumption of your ships?
  o Which onboard energy consumers do you focus on?
  o Do you use noon reports?
  o Do you use auto-logging systems?
  o Do you have flow meters onboard?
  o How frequently do you collect data?
  o What do you use the data from the systems for?
  o Have you changed your systems in recent years?
  o What are the key factors, which influence a ship’s fuel consumption?
    ▪ Which of these factors do you have an influence on?

View on EU MRV

- How does the EU MRV affect the work you do and your shipping company?
- How do you collect data for MRV?
  o Which data do you collect?
  o Where do you collect the data from?
  o Who collects the data?
- Resources for MRV data collection
  o Who is responsible for MRV data collection in your company?
  o Did you allocate additional resources to the data collection process, in terms of:
    ▪ Human resources,
    ▪ New IT-infrastructure, or
    ▪ Monitoring equipment onboard the ships in your fleet?
  o How much does the MRV data collection require of your company in terms of man-hours per year/human resources?
    ▪ To comply with EU MRV did you need to make any changes in the collection of fuel consumption data from your fleet (i.e., amend or revise your vessel performance monitoring systems)?
      ▪ If yes, which, how and why?
- Did you use consultants or other external experts for the design or implementation of your MRV data collection system?
  o How do you quality control your MRV data?
    ▪ Who is verifying your MRV data?
    ▪ How does verification take place?
      ▪ How frequently does it take place?
      ▪ Can you use the process of data verification to improve your data quality?
- How does company’s fleet performance monitoring system compare with the data collection for the MRV and DCS systems?

View on IMO DCS

- How do you collect data for the IMO DCS?
  o Which data do you collect?
  o Where do you collect the data from?
  o Who collects the data?
  o How frequently do you collect data?
- Could you please compare the IMO DCS and the EU MRV?
  o What are the key differences between the two systems?
    ▪ Do these differences affect your work or data collection in any way?
  o Do you see any differences between the systems in terms of data quality?
    ▪ If yes, where and why?

Internal use of MRV and DCS data

- How do you use MRV and DCS data within your shipping company?
  o For what purposes? Why?
  o Can you use the MRV data to identify a potential for energy efficiency or other types of improvement potentials within your fleet?
  o Can you use the MRV or DCS data to identify fuel inefficient ships in your fleet?
    ▪ Have you actually done so?
- To what extent can you and your colleagues in the shipping company affect the efficiency measurements in the MRV and DCS systems?
  o Can you make changes in the operations of your ships, which would improve the performance measurements of your ships in the MRV and DCS systems?
    ▪ If yes, how?
    ▪ If no, why not?
- Do the MRV or DCS data convey the same message with regard to the efficiency of individual ships?
  o If not, what are the causes for the observed differences?
    ▪ Do the MRV and DCS systems reflect the true performance differences between individual ships?
    ▪ Do the MRV and DCS data sets align with the performance metrics that you use in your internal fleet performance monitoring system?
      ▪ If yes, what are the key performance metrics?
      ▪ If not, why not?

External use of MRV and DCS data

- Who do you expect to use the MRV and DCS data, when data sets become publicly available?
  o Will charterers use them for chartering decisions?
- Can they identify the most fuel efficient ships in the market?
  - Will you or your company use the data sets, when chartering ships?
    - Can you use the MRV or DCS data sets for guiding your own chartering decision?
  - Could other stakeholders have an interest in using the MRV data?
    - Who? Why?
    - For instance:
      - Port authorities (for green port fee reductions)?
      - Policy makers?
        - For implementation of Market-Based Measures in the future?
        - What is your view on MBMs?
      - Journalists?
      - NGOs?
      - Others?
- Does the MRV or DCS systems provide you with any **business opportunities**?
- Does the MRV or DCS force you to reveal **commercially sensitive information**?
  - If yes, which information?
  - And what effects do you foresee from MRV and DCS?

**Link between MRV, DCS and private eco-rating schemes**

- Are you familiar with private eco-ratings in shipping?
  - If not: CCWG, CSI, ESI, Rightship, BetterFleet, EVDI
  - If yes, which ones?
    - Do you use them?
      - If yes, what for?
    - Do you know of other using it?
  - How do the eco-ratings affect the work you do, your company and the business of tanker shipping more broadly?
- From you point of view, how do the MRV, DCS and the private eco-rating schemes (CCWG, ESI, CSI, Green Award, Rightship/EVDI and BetterFleet) compare?
  - Are they measuring the same factors?
  - Or are there important differences between any of the ratings?
    - If yes, which?
  - Are there any overlaps between the private eco-ratings and the MRV and DCS systems?
    - If yes, which?
    - In your opinion, which of the systems provide the best measurement of a ship’s energy efficiency?
      - And of its overall environmental performance?
- Do cargo-owners ask you questions regarding your CO2 emissions or any other aspects of your environmental footprint?
  - If no, why not?
  - If yes, what do they ask?
- And who asks?
- What do they use the information for?

**View on the air emission regulation in shipping**

- What is your view on regulation of air emissions in shipping?
  - Regulation from the IMO? The EU? And others?
  - **How is regulation affecting your business** and your company?
    - What regulation is affecting you the most?
    - How is regulation on air pollutants and regulation on GHG affecting your company? And the shipping markets?
    - What are the costs associated with compliance for you?
  - In your opinion, **how can shipping achieve the GHG emissions reductions** agreed at the April 2018 MEPC by 2050 (i.e. a 50 per cent reduction in absolute GHG emission levels relative to 2008)?
    - To what extent can these ambitions be achieved through efficiency improvements in the shipping sector?
    - In your opinion, does shipping need a new type of fuel to achieve the goals?
- From your point of view, why did the MRV and DCS systems come into existence?

**Shipping company strategy**

- In addition to the information available on your web-page and in your annual report, so short follow up or clarifying questions about:
- Which **trades** are you active in?
  - In terms of geography?
  - In terms of vessel sizes?
  - In terms of contract types and contract durations?
    - Use of spot, time charter, bareboat charters and Contracts of Affreightments?
  - Do you engage in asset play?
  - Do you contract newbuildings or buy second-hand vessels?
- How are ships **managed**? In-house or outsourced set-up for:
  - Chartering
  - Operations
  - Technical management
  - Crewing
  - Why? What is the motivation behind this set-up?
- What are the key **sources of competitiveness** for your company?

**Interview guide for environmental NGO, May 8, 2020**
Current drivers for emissions abatement

- In your opinion, what are the main factors or key drivers for the reduction of air emissions from ships and shipping today?

Regulation

- What is your opinion on the current regulation for reduction of GHG and air pollutants, respectively?
- On GHG, which regulation is most effective in abating emissions?
  - What is your opinion on each of the following regulatory measures? How effective are they in reducing emissions?
    - IMO regulation:
      - EEDI
      - SEEMP
      - IMO DCS
    - EU regulation:
      - MRV
        - Does MRV help reduce ships’ fuel consumption?
          - If so, why?
          - If not, why not?
            - MRV publishes annual data on CO2 per transport-work for over 11,000 individual ships:
              Does it not provide much needed transparency on energy efficiency to charterers and other actors in shipping? Does it not help shipping managers save fuel and reduce emissions?

- On air pollution
  - SECAs:
    - When SECAs were introduced in 2015, many shipping managers (including the Trident Alliance) voiced concerns about non-compliance (i.e. use of high-sulphur content fuel without exhaust gas cleaning). Is this still a concern? Do everyone comply?
    - How do policy makers ensure compliance?
  - Global Sulphur cap
    - Why did the Global Sulphur cap enter into for on January 1st, 2020?
    - What are your views on the common compliance strategies employed by shipping managers?
      - Scrubbers
      - MGO
      - LNG
      - Methanol
    - How did the transition to 0.5 % Sulphur content rule on January 1st, 2020 seem to go?
Prior to 2020, many shipping managers feared that insufficient availability of compliant, low-Sulphur fuels. In retrospect, did fuel-availability become a problem after January 1st? Why/why not?
Prior to 2020, many shipping managers feared that they could not pass on the added fuel costs to their customers/charterers. In retrospect, how did it go?

- Do you see any risks of non-compliance regarding the Global Sulphur cap?
- In retrospect, what can shipping managers and policy makers learn from the experiences with the global Sulphur cap?
- How does the Sulphur regulation affect the efforts to reduce GHG emissions from shipping?
  - NOx Tier III
    - How does IMO’s NOx regulation affect air emissions from ships?
    - How does the regulation affect shipping markets?
    - How does NOx regulation affect efforts to reduce GHG emissions?
- Other emissions regulation (e.g. on particulate matter)?

Non-governmental initiatives

- What is your opinion on non-governmental emissions abatement initiatives in shipping?
- Cargo-owner initiatives
  - To what extent are cargo-owners contributing to reduction of GHG emissions and air pollution from ships?
    - If so, how do they do that?
      - Which types of cargo-owners engage in such efforts? Which kind of corporations engage in such?
      - Why do they engage in such efforts?
      - How effective are they in reducing emissions from ships and shipping in general?
      - Do you observe differences in behavior among cargo-owners in different shipping segments (e.g., tankers vs. dry bulkers, or cruise and container shipping vs. dry bulk and tanker shipping)?
        - If so, why?
        - Are some segments more exposed to public opinion than others?
        - Does that matter for the segments’ efforts to reduce emissions?
  - If not, why not?
    - Which types of cargo-owners do not engage in efforts to reduce GHG emissions?
    - Do they not see shipping emissions as a problem?
    - Consumer pressure – translated to cargo-owner demands – have been very effective in bringing down accidental oil spills in tanker shipping. Could you imagine a similar process for GHG and air pollution?
      - If so, what would it look like?
      - If not, why not?
- **Multi-stakeholder initiatives**
  o Do private multi-stakeholder initiatives play a role in reducing GHG and other air emissions?
    ▪ If so, which?
    ▪ Are you familiar with the following initiatives: **Clean Cargo, Clean Shipping Index, Rightship, Getting to Zero coalition**?
      • If yes, why have these schemes and initiatives come into existence?
      • To what extent are these schemes improving the environmental performance of individual ships/reducing air emissions from ships?
      • How would you characterize the level of ambition for these initiatives?
      • **How effective are they** in abating emissions?
      • What are the **limitations** of such initiatives?
    ▪ Do you in your NGO interact with the private eco-rating schemes?
      • If so, how and why?
      • If not, why not?

- **Port authority initiatives**
  o In your opinion, how are port authorities affecting emissions from ships and shipping in general?
  o What are the key measures port authorities can use to reduce emissions?
    ▪ What are your views on the following measures:
      • Green port and fairway dues (based on **Environmental Ship Index, Green Award, Clean Shipping Index** or similar eco-ratings)
      • Provision on **onshore power**
      • Bunkering facilities for **alternative fuels** (e.g., LNG, and biofuels)
      • Measures to reduce vessel turn-around time in port (e.g., **virtual arrival**, port call optimization through sharing of real-time traffic information)
    ▪ **How effective are they** in abating emissions?
    ▪ What are the **limitations** of such initiatives?

- **Shipping financiers**
  o In your opinion, how are banks/lenders and other ship financiers affecting emissions from ships and shipping?
  o What are your views on the recently announced **Poseidon Principles**?
    ▪ Do you expect these principles to gain traction among shipping financiers?
    ▪ Do you expect these principles to reduce air emissions from new ships?
      • If so, how?
      • If not, why not?

**Looking ahead:**

- **How can shipping achieve the IMO GHG goals?**
  o Which of the IMO GHG goals is most difficult to achieve?
    ▪ To reduce CO2 footprint per ton-mile, by 40 % by 2030 and 70 % by 2050
    ▪ To reduce absolute emissions by 50 % by 2050;
    ▪ To phase of fossil fuels in second half of this century?
Which new private initiatives are most likely to achieve significant emissions reductions?

Which new regulatory initiatives are most likely to achieve significant emissions reductions?

- What is your view on the following measures?
  - More rigorous SEEMP
  - More demanding EEDI
  - Speed limits
  - Market based measures
    - Bunker tax
    - Emissions Trading Scheme
  - A ban on fossil fuels?
  - Any alternative measures?

- What is your view on the regulatory work by:
  - The IMO
  - The EU
    - MRV
    - Inclusion of shipping emissions in an European ETS
  - National regulation

Your own NGO work: How do you try to reduce emissions from ships?

- In your experience, which NGO initiatives are most effective?
- What are the limitations of NGO initiatives?