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Executive summary

This report includes feedback on the THETIS-MRV system of EMSA for collection and provision of the EU-MRV data. Feedback from both Jadrolinija and Croatian Register of Shipping was collected, which could be considered to improve the reporting process.

Moreover, opinions of the above stakeholders on the “Fitfor55” legislative proposal by the European Commission are reported, with a focus on the possible amendment of the EU-ETS system for including shipping.

The document is complemented with a discussion based on expert opinions by the Croatian Shipowners Association.

1. Introduction

In the frame of GUTTA specific objective 2 “To facilitate the implementation of the MRV by interfacing between and private actors”, Croatian Shipowners’ Association Mare Nostrum (CSA) asked Jadrolinija, Croatian Register of Shipping (CRS), and some Italian shipowners (GNV, Grimaldi, Moby Lines, and SNAV) to provide feedback about the THETIS-MRV system¹ of EMSA for collection and provision of the EU–MRV data. THETIS-MRV is the EU MRV system where shipowners report their CO₂ emissions from ships according to the EU Regulation 2015/757. For a voyage to be covered by the EU MRV, at least one of the two ports of call of the voyage must be located in an EU territory, i.e. voyages into, within and out of the EU shall be reported.

CSA consulted Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC) about the questions. The questions were structured with the aim of hopefully improving the degree of user satisfaction with the THETIS-MRV system. The questionnaire consisted of two parts, and it was intended for persons who are responsible for entering data into the THETIS – MRV system (shipowner) or those who control entered data (verifier). Respondents were asked to give their professional opinion and suggestions regarding updates recently introduced in the THETIS – MRV service.

Jadrolinija and CRS filled the questionnaire, and in this report their answers will be analyzed.

The rest of this document is structured as follows: in Section 2, a brief description of the respondents, in Section 3, feedback on the technical updates introduced by EMSA on THEITS-MRV is provided. In Section 4, feedback on the Fitfor55 package and possible amendments of EU-ETS is provided. In Section 5, the opinions of CSA are expressed before the document is concluded in Section 6.

2. Brief description of the respondents

Jadrolinija is a member of the Croatian Shipowners’ Association and operates in both national and international routes as one of Croatia's oldest shipping transport companies. In total Jadrolinija has 55 ships and three of them are ferries operating on cross-boundary routes with a total of 29.436 gross tonnages. Together they could transport 3.825 passengers and 754 vehicles. Additionally, Jadrolinija has 38 ferries operating across the Croatian coast plus 4 passenger ships and 10

¹ <https://mrv.emsa.europa.eu/>

catamarans. According to the goals of the EU Green Deal, Jadrolinija is focused on the transition to alternative solutions. Therefore, Jadrolinija plans to buy three electric-powered 'green' ferries which can sail without polluting and CO2 emissions. Croatian Register of Shipping is also a member of the Croatian Shipowners' Association Mare Nostrum and it is a certified verifier for Croatian Shipowners which performs the following activities:

- classification of ships;
- statutory certification of ships on behalf of the national Maritime Administrations;
- statutory certification of recreational crafts;
- certification of materials and products;
- conformity assessment of recreational crafts;
- conformity assessment of marine equipment;
- conformity assessment of pressure vessels;
- certification/registration of quality management systems.

3. Feedback on technical updates on THETIS-MRV

Throughout the time of its operation, the THETIS–MRV has undergone some updates and some improvements have been made. In order to get feedback about the progress of collecting information, this report will show feedback from shipowners and verifiers. To get feedback and hopefully improve reporting, CSA asked them about their opinions on improvements and further suggestions regarding reporting into THETIS-MRV. The Questionnaire will be added as Annex at the end of the Report.

They found some improvements useful such as that Document of Compliance (DoC) includes the Emissions Report (ER) revision version number. Also, when Flag State users have the possibility to download Verified ER and DoC information. Moreover, the possibility to search for multiple (International Maritime organization) IMO numbers in the My Fleet page search filter was appreciated. It is also helpful that user signature can be uploaded on the Verification Report (VR) and DoC and that companies can download Monitoring Plan (MP), ER, VR and DoCs in Bulk. All in all, most of the changes were found helpful and useful.

4. Feedback on new legislative proposals by the EC

On 14 July 2021, European Commission presented the Fitfor55 package² which aims to align the EU’s climate and energy policy framework with its updated economy-wide climate target for 2030 of reducing net greenhouse gas emissions by at least 55%, as compared to the 1990 level, and to put it on track to reach its objective of becoming climate neutral by 2050. The target of reduction was endorsed by the European Council in its conclusions of 10-11 December 2020³. Climate neutrality is now part of the climate law of the Union and so is legally binding⁴.

To deliver EU’s 2030 climate target, all relevant Union institutions and the Member States should take the necessary measures at Union and national level, respectively, to enable the collective achievement of this climate-neutrality objective, taking into account the importance of promoting both fairness and solidarity among the Member States and cost-effectiveness in achieving this objective. Therefore, the “Fitfor55” package consists of a set of interconnected proposals and covers a range of policy areas and economic sectors: climate, energy and fuels, transport, buildings, land use, and forestry. The Commission is also proposing to include for the first time shipping emissions in the EU-ETS.

For the second part of the questionnaire, the questions will be analyzed synoptically via tables (Tab.1-4), followed by some comments by CSA.

Table 1: Question #1.

QUESTIONS	CRS	JADROLINIJA
In July 2021, the European Commission adopted a package of proposals to make the EU's climate, energy, land use, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 ⁵ levels. The Commission is	<i>This could affect shipowners in terms of additional investment and/or operational costs. Consequently, it could affect negatively to freight rates. On the other side, the balance could be achieved enabling of certain kind of stimulations and/or</i>	<i>In our opinion the proposal to include shipping emissions in the EU-ETS is a kind of hasty step forward. Different technologies using alternative fuels can be significantly easier to applied in any kind of land transportation than in shipping. Technologies with</i>

² <https://data.consilium.europa.eu/doc/document/ST-10849-2021-INIT/en/pdf>

³ <https://www.consilium.europa.eu/media/47296/1011-12-20-euco-conclusions-en.pdf>

⁴ <https://www.eppgroup.eu/newsroom/news/climate-law-55-percent-net-is-very-ambitious#:~:text=%22Today's%20agreement%20is%20historic.,strong%20involvement%20of%20the%20Parliament.>

⁵ https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3541

<p>also proposing to include for the first time shipping emissions in the EU-ETS.</p> <p>How this could affect shipowners? What would be the outcome? Could you suggest any better solution in order to decrease GHG emissions from the maritime sector, in line with the Paris Agreement goals and IMO Initial strategy of 2018?</p>	<p><i>subventions for shipowners to invest/use in new technologies required to achieve GHG emission reduction targets.</i></p>	<p><i>alternative fuels are not yet mature enough to be safely applied in shipping. Pushing shipping industry into EU-ETS actually means forcing shipping industry into application of immature technologies.</i></p> <p><i>We are of opinion that alternative fuels and corresponding technologies are not yet commercially viable and basic fuel supply chains are not yet established. Premature inclusion of shipping in EU-ETS will not accelerate the reduction of GHG emission. It will make sense once when various actors in that process make basic preparations which will enable feasible transition to low GHG emissions technologies.</i></p> <p><i>To obtain ambitious goals declared in new EU's climate policy it is needed great synergy of various actors in the process. Governments and regulators supported by expertise coming from classification societies, equipment manufacturers, fuel producers, etc. have to prepare clear strategies and give directions to participants in shipping business. On the</i></p>
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		<p><i>other side, shipping companies will initiate transition to new technologies once when they get better overview over available solution, costs of introduction of new technologies, corresponding fuel cost and risks related to different technologies. Without having such inputs, shipping companies will remain reserved to implement new technologies.</i></p>
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From the answers it could be concluded that both the verifier (CRS) and the shipowner (Jadrolinija) were not enthusiastic about Commission’s proposal to include shipping emissions in the EU-ETS.

CRS emphasized how shipowners could suffer from additional costs regarding new technology implementation and Jadrolinija was worried that technologies with alternative fuels are not yet mature enough to be safely applied in shipping. Currently, most used alternative fuel is Liquefied Natural Gas (LNG) which leads to lower CO2 emissions than heavy fuel oil which is also known by the technical names as Number 6 Fuel Oil (Bunker C) as well as Very Low Sulfur Fuel Oil (VLSFO). Names also used interchangeably include Fuel Oil, Heavy Oil, Marine Fuel, Furnace Oil, Marine Heavy Fuel Oil, Bunker Oil, Bunker Fuel⁶. However, the upstream CO2 emissions due to the liquefaction process could make LNG not fit as an alternative fuel in the long term. Therefore, technologies should focus on more climate friendly alternatives.

In the second question it was presented how the Renewable Energy Directive will set an increased target to produce from renewable sources at least 40% of the energy used in Europe in 2030. Accordingly, maritime fuels cause significant pollution and require dedicated action to complement emissions trading. The Alternative Fuels Infrastructure Regulation requires that ships have access to clean electricity supply in major ports. The FuelEU Maritime Initiative⁷ will

⁶ <https://www.forbes.com/sites/nishandegnarain/2020/08/14/what-is-heavy-fuel-oil-and-why-is-it-so-controversial-five-killer-facts/?sh=73ce0eaa74c0>

⁷ https://ec.europa.eu/info/files/fueleu-maritime-green-european-maritime-space_en

stimulate the uptake of sustainable maritime fuels and zero-emission technologies by setting a maximum limit on the greenhouse gas content of energy used by ships calling at European ports.

Table 2: Question #2.

QUESTION	CSR	JADROLINIJA
<p>How could shipowners handle the upcoming costs regarding the alternative fuels infrastructure? What will be the impact of the the Renewable Energy Directive on Croatian shipowners and on transport users?</p>	<p>There should be a long term and stable regulatory framework available. A clear long-term plan for each alternative fuel is key to invest in alternative fuels infrastructure.</p> <p>The shipowners have to find balance between upcoming additional costs and energy savings improving energy efficiency by proper energy management, and also by use of renewable energy related to new technologies.</p> <p>Also, Administrations of the States have to ensure corresponding facilities for clean electricity supply and bunkering infrastructure for alternative fuels in major ports.</p>	<p>Strategy for development of alternative fuels infrastructure is still in preparation. Once when the national strategy will be issued it will be needed great synergy between all participants to prepare infrastructure that will enable implementation of use of alternative fuel. Cost to build infrastructure is not yet estimated so we can't estimate related impact on shipping companies. In any case, we expect significant increase of operational costs due to transition to technologies with alternative fuels.</p>

Regarding upcoming costs from the alternative fuel infrastructure, CRS emphasises the importance of corresponding infrastructure and the need of State's help while shipowners should consider usage of renewable energy. Jadrolinija states how national strategy among all participants is important to enable alternative fuel implementation.

In July 2021, European Commission published a Proposal for a Regulation of the European Parliament and of the Council on the use of renewable and low – carbon fuels in maritime transport and mending Directive 2009/16/EC. ⁸

Also, Jadrolinija pointed out that they are looking for transitional technologies convenient for application on ferries they operate. For the time being they are considering different sorts of hybrid solutions such as: electric propulsion supplied with electricity produced on board and electricity stored in batteries charged from land network. Electricity on board could be produced by alternators driven by Marine Gasoil (MGO) or dual fuel internal combustion engines. As a quite viable solution and as alternative to MGO, they are considering use of renewable methanol, because of relatively simple technical requirements for bunkering, storage and transfer on board. For the time being there are still two main concerns related to green methanol: available and reliable supply of green methanol and the price.

By 31 August 2024, companies shall submit to the verifiers a monitoring plan for each of their ships indicating the method chosen from among those set out in Annex I to monitor and report the amount, type and emission factor of energy used on-board by ships and other relevant information.

Table 3: Question #3.

QUESTION	CSR	JADROLINIJA
In your opinion what should be excluded from the list of the EU-MRV monitoring elements and why? (Please check the list on page 26/247) ⁹	No specific monitoring element found to be excluded from the list, but the templates for monitoring plans to be determined by the Commission should be clear and simplified as much as possible.	We are still in the beginning of preparation process and have not yet built any opinion about items that should be excluded from the list. At this point, we don't have any proposal for exclusion.

Both CRS and Jadrolinija did not mention what should be excluded from the list of the monitoring elements. Also, they did not propose any item to be added as a monitoring element.

⁸ https://ec.europa.eu/info/sites/default/files/fueleu_maritime_-_green_european_maritime_space.pdf

⁹ https://ec.europa.eu/info/sites/default/files/fueleu_maritime_-_green_european_maritime_space.pdf

Table 4: Question #4.

QUESTION	CSR	JADROLINIJA
Do you think that shipowners will successfully meet all requirements of the Proposal for a Regulation of the European Parliament and of the Council on the use of renewable and low-carbon fuels in maritime transport and mending Directive 2009/16/EC)? Which requirements will be the hardest to reach?	In general, the shipowners with smart “green-minded” and stable business policy will successfully meet all requirements of the Proposal, but successful meeting all requirements of the Proposal does not depend exclusively on shipowners. The requirement for carbon neutrality by 2050 will be the hardest to reach.	It’s hard to predict. As mentioned, we are still in the beginning of the preparation process. We will have more to say once when we get a proper overview of obstacles and difficulties related to some requirements.

According to CRS, in order to successfully meet all requirements of the Proposal, shipowners should have a smart “green minded” and stable business policy. However, meeting all requirements of the Proposal doesn’t depend only on shipowners but also on technological progress.

When it comes to the suggestions that could be beneficial for shipowners in order to reach requested goals of the Proposal, Jadrolinija doesn’t have any suggestions while CRS thinks that: “the shipowners have to find balance between upcoming additional costs and energy savings improving energy efficiency by proper energy management, and also by use of renewable energy related to new technologies. On the other side, the balance could be achieved enabling of certain kind of stimulations and/or subventions for shipowners to invest/use in new technologies required to reach requested goals of the Proposals”.

Lastly, CRS added that cooperation of all stakeholders in maritime sector is requested to meet the goals of the Proposal. This includes regulatory bodies, shipowners, harbours logistic, alternative fuel and fuel treatment industry, administrations of the states, banks, etc. All in all, shipowners are aware of the obligations to decrease emissions and they know they will have to invest in alternative solutions. The main problem are finances because smaller shipowners don’t have enough funds to keep up with the upcoming regulations and uncertain alternative solutions.

The results could be higher prices of the ship lease which could lead to shifting business deals to bigger and more competitive shipping companies.

5. Discussion

From the shipping perspective, there is no doubt that, to meet the fitfor55 package goals, shipowners will have to focus on finding alternatives to decrease CO₂ emissions. In order to do so, short- and medium-term measures include limiting the maximum power of marine engines, installing devices to increase navigation efficiency and using available alternative fuels. Long-term measures are ordering and buying new ships to operate without or with reduced greenhouse gas emissions. The cost for measures currently available on the existing fleet (excluding loss of revenue while the device is being installed) ranges from \$100,000 to \$1,000,000 per ship. The cost of building a new ship that would have somewhat reduced CO₂ emissions (natural gas propulsion) is 20% higher than the price of a classic ship.

The shipowners think that the biggest difficulty today is that there is no technology that would significantly reduce GHG in the shipping sector. Except perhaps for smaller ships in coastal navigation that are not even covered by Fitfor55 and the EU directive. All currently available solutions result in minimal emission reductions which are around a lower one-digit percentage. New "green" fuels are being developed, which should deliver larger GHG emission savings, but shipowners have no impact on that since it is in the domain of energy companies. Currently, it is impossible to estimate when and where these fuels will be available in sufficient quantities, what modifications to the engines will be needed, and what the price will be.

Moreover, shipowners believe the problem is that apart from reducing engine power, adjusting sailing speed and using weather routing (the GUTTA-VISIR system for ferries developed in the frame of GUTTA project could be an example¹⁰), there is not much that shipowners could do to reduce CO₂ emissions. However, energy savings devices could be installed. Slow steaming is possible for not-perishable goods. Hopefully, the availability of alternative fuels will depend on the demand signals the market will signalize. When alternatives become available, additional education of all the staff involved in the process is likely to be needed. In any case, there will be significant impacts (both positive and negative) related to the entire economy, jobs, and taking into account local - EU - regulations and the competitiveness of domestic shipping companies.

¹⁰ <https://www.gutta-visir.eu/>

In the Proposal for a Regulation of the European Parliament and of the Council on the use of renewable and low-carbon fuels in maritime transport and amending Directive 2009/16/EC is stated that, to have an impact on all activities in the maritime transport sector, it is appropriate that this Regulation covers part of the journey between a port under the jurisdiction of a Member State and a port under the jurisdiction of a third country.

Croatian shipowners think that the regulation recognizes "shared but differentiated responsibilities" of shipping at the global level. Also, they expect a real risk of carbon leakage where vessels would make evasive port calls to avoid the carbon pricing. Carbon leakage refers to stopping at non-EEA ports for not being subject to the reporting into the EU-MRV and, in future, EU-ETS. However, ETS Study by Transport and Environment (T&E) showed that "under (October 2021) carbon prices (€60/t CO₂) there wouldn't be risk of evasion under a semi-full scope covering intra-EU and half of extra-EU emissions.¹¹ This study was conducted on behalf of Germany's Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) as part of the project "Analyses and assessments of the climate protection impact of instruments and measures for greenhouse gas reduction in transport, development of design options". At €100/tCO₂, the Baltic region has a 9% risk of evasion compared to 15.6% for the main ports of the Netherlands, Spain and Greece. Results show that this is a result of most of the non-EU Baltic trade calling at Gdansk and Klaipeda, whose distance from the evasion ports renders evasion economically unattractive. Analysis shows that a range of factors influences the decision to evade. Factors that should be considered are location of the port, vessel size and the total length of voyage. According to the analysis, the larger vessels (above 10,000 DWT) are most likely to evade but even the largest vessels (above 200,000 DWT) will not be tempted to evade under €112/tCO (Page 18 of the Study).

The European Commission (EC) presented an amendment to the ETS Directive in the context of free allowances, the link with the Carbon Border Adjustment Mechanism (CBAM) and the strengthening of the benchmark. The EC pointed out that free allowances remain unchanged until 2025. Currently, the projection of free allowances is not planned after 2030. Penalty is proposed if companies do not implement the recommendations from the energy certificates in a way that will reduce the allocated free allowances by 25%. CBAM is an environmental mechanism that prevents "carbon leakage", and is fully compliant with WTO rules. Shipowners will have to pay 20% of the total emissions in 2023 in 2024, and from 2027 the share of payments will increase to 100%.

¹¹ https://www.transportenvironment.org/wp-content/uploads/2021/11/202110_ETSE_Baltics_Oeko_report_FINAL-18.10.21.docx-1.pdf

Shipowners believe that the “polluter pays” principle should be defined more concretely and strongly. Namely, in shipping, a contract of the "Time Charter" type is very common, where the shipowner makes both ship and crew available to the charterer. In the case of a time charter, the lessee is the carrier of the freight transport business who determines the fuel (and procures it), route, speed, etc. while the shipowner is merely executing his order. Shipowners believe that the eventual cost of ETS should not be passed on to the shipowner in this case, especially for contracts that are long-term and signed before learning of this Directive. The lessee can take this cost into account when concluding his work, while the shipowner cannot, especially for contracts that have already been concluded. Shipowners propose that there should be specific regulation to allocate the allowances for a special case, such as voyages for which the carrier is not the shipowner but the lessee, and accordingly exempt the shipowner from the ETS (or take into account some reduced factor). In “Time Charter” type of contract, the shipowner has no influence on the type and amount of fuel that is loaded and consumed on board, but it is exclusively in the domain of the lessee. The lessee is not mentioned anywhere in the Regulation. After the entry into force of the Directive, it is possible to conclude a contract with the Lessee that will take it into account, but for existing, multi-year contracts that are already in force and will be in force after the Directive, this is not possible. Shipowners find that these specific ships with already signed contracts are significantly more burdened by emissions than those on the "free" market, because they put the lessee in a privileged position. In this case, only the shipowner bears the consequences and is placed in an unequal position.

However, according to the article: “The impact of split incentives on energy efficiency technology investments in maritime transport” by Nishatabbas Rehmatulla and Tristan Smith it is stated following: “In a spot charter, a charterer contracts a shipowner to transport a specified amount of cargo, which is similar to hiring a taxi. The amount paid by the charterer is for a unit of cargo transported, which includes an apportionment of all the costs incurred by the shipowner including fuel costs for that voyage. A contract of affreightment is essentially the same as a spot charter, but is constrained to a fixed route over a specified duration, which gives the freedom to a shipowner to choose any vessel to meet the cargo transport requirement. In a time charter, a charterer hires a vessel along with the crew for a certain period of time or a single trip (trip time charter), giving the charterer the operational control of the vessel, similar to hire of a vehicle with a driver. The amount paid by the charterer is for the daily hire cost of the ship and crew and the charterer also bears the fuel costs related to the voyages undertaken during that period. In a bareboat charter the charterer has full control of the vessel along with the commercial and legal responsibility for it, similar to a long lease”.¹²

¹² Rehmatulla, N., Smith, T., (2020), The impact of split incentives on energy efficiency technology investments in maritime transport, Energy Policy, University College London

Since EU-ETS includes many regulations and rules, shipowners should organize a special team within the company that will include staff working in the field of finance, law, technical expertise and chartering department. According to today's timeline, usually on December 31, 2021, it is the end of the racking cycle. Then on February 28, 2022 it is the allocation of free allowances. Delivery of verified emissions reports in until March 1, 2022, and until April 30, 2022, it is possible to transfer of units to the Union Registry. When shipping enters EU ETS, after verification, shipowners should determine with whom and how the emissions will be bought. It is necessary to choose a reliable supplier who will monitor the market. Trading on the stock exchange is very short and it is important to choose a disciplined, professional, and proven supplier. Moreover, it is necessary to keep up with other trading systems outside EU such as UK ETS and China ETS.

6. Conclusion

By amending the EU-ETS directive and implementing the goals through the Fitfor55 package, shipowners can expect additional costs and uncertainty. According to shipowners' opinion, the ultimate goal of the EU-MRV is to collect the amount of CO₂ ships emit in the EU at the company level because from 2024, shipowners will be required to provide a pooled report on emissions from all their ships, not just from specific ships (above 5000GT) as it is now. Due to the expected high costs of ETS units, shipowners should consider cost-sharing with tenants who rent the boat for business. Moreover, the usage of renewable and low-carbon fuels (RLF, including liquid biofuels, e-liquids, decarbonized gas (incl. bio-LNG and e-gas), decarbonized hydrogen, decarbonized hydrogen-derived fuels (including methanol, and ammonia), and electricity) will be essential for maritime transport to contribute to the EU climate goals.

Currently (December 2021), one ton of CO₂ costs around 80 euros in the EU-ETS¹³, and the amount of emitted CO₂ from the previous year is being considered for payment. It is necessary that shipowners make a commitment to purchase ETS emissions on the stock exchange and, to reduce emissions, it is necessary to reduce the use of fossil fuels and switch to alternative solutions. According to the Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the use of renewable and low-carbon fuels in maritime transport and amending

¹³ <https://ember-climate.org/data/carbon-price-viewer/>

Directive 2009/16/EC¹⁴, food and feed crop-based biofuels are out of the scope of the policy options. and the next options are methanol and hydrogen for which there is insufficient infrastructure. Also according to Proposal LNG is a technologically mature solution that substantially contributes to air pollution reduction, but its contribution towards GHG reduction can be limited, particularly taking into account methane slip, and depends on the engine technology but liquefied natural gas (LNG) can be used as a transitional fuel.

Currently, shipowners are worried because restrictions are imposed on them without many technological possibilities. However, the amendment of the EU-ETS system still has to be done and CSA will continue to follow the work of the Ministry of Economy and Sustainable Development in Croatia that initiated the working group regarding environmental legislative changes at EU level. All in all, even though CSA's members are not enthusiastic about the introduction of a tax on CO₂ emissions in maritime affairs, and they think taxation should be focused on the one who benefits from transport, and not on the one who performs it. However, shipowners put efforts to contribute to the decreasing CO₂ through alternative solutions.

¹⁴ https://eur-lex.europa.eu/resource.html?uri=cellar:078fb779-e577-11eb-a1a5-01aa75ed71a1.0001.02/DOC_1&format=PDF

ANNEX – QUESTIONNAIRE

Dear Sir/Madam,

These questions are structured with the aim of improving the user degree of satisfaction with the THETIS-MRV system. Also, it can impact technical updates taking into account the DG Clima assessments on the past releases of the dataset, as well as the process of amendment of the EU-MRV Regulation. Also, your opinion about further EU policies on reducing net greenhouse gas emissions and following requirements will be included in a part of the report where shipowners' view about how this would impact the industry's business will be discussed.

The questionnaire consists of two parts.

Your answers will be part of the D.4.2.3 deliverable “User satisfaction with the THESTIS – MRV system” of the GUTTA project, 2014 - 2020 Interreg V - A, Italy - Croatia CBC Programme.

Thank you for your participation.

PART 1

The THETIS-MRV service has recently been modified to include warning and error messages when companies are entering seemingly incorrect or incomplete data, implementing a quality control check before the company can submit the Emission Report (ER) to the verifier, as well as to prevent the company to submit an ER with incomplete reporting period, etc¹⁵.

Please give your professional opinion and suggestions about the following changes in the THETIS – MRV service. Please write if you find the change helpful or if you have some advice for improving.

Note that this questionnaire is intended for persons who are responsible for entering data into the THETIS – MRV system and those who control entered data (Croatian Register of Shipping).

¹⁵ https://ec.europa.eu/clima/sites/default/files/transport/shipping/docs/swd_2021_228_en.pdf

Changes introduced in Version 4.7

1. artf59972 - Improve message "Missing source values!" in result of a division by zero
2. artf61206 - Implement a quality control check before the company can submit the ER to the verifier
3. artf61429 - Improve DoC reference to the ER revision version number
4. artf62291 - Improve process of requesting a company to remove a ship from a MyFleet list
5. artf62979 - Provide Flag State users the possibility to download Verified ER and DoC information.
6. artf63002 - Amend wrong title in PART B of the ER on the PDF version (Verification Statement)

Changes introduced in Version 4.8

7. artf46108 - Improve process for creating a new VR version considering the content of the previous version
8. artf46974 - Implement control in case Company changes Verifier and the MP is assessed
9. artf48441 - Trim blank spaces from IMO numbers when adding ships
10. artf49535 - Introduce ER status notation in PDF Emission Reports
11. artf50162 - Allow for multiple IMO numbers search in the My Fleet page search filter
12. artf53097 - Introduce error location information in the XML files upload log
13. artf57584 - Introduced the possibility to upload a file for ship particulars update in bulk
14. artf57847 - Introduced the possibility to upload user signature to be placed on the VR and DoC
15. artf59706 - Improve the reporting of direct emission to derive the related fuel consumption

16. artf60360 - Introduced the possibility for companies to download MP, ER, VR and DoCs in Bulk

17. artf64788 - Improve the publication of DoC information with regards to issue, expiry date or not availability

PART 2

1. In July 2021, the European Commission adopted a package of proposals to make the EU's climate, energy, land use, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.¹⁶ The Commission is also proposing to include for the first time shipping emissions in the EU ETS.

How this could affect shipowners? What would be the outcome? Could you suggest any better solution in order to decrease GHG emissions from the maritime sector, in line with the Paris Agreement goals and IMO Initial strategy of 2018?

¹⁶ https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3541

2. The Renewable Energy Directive will set an increased target to produce from renewable sources 40% of the energy used in Europe in 2030. Accordingly, maritime fuels cause significant pollution and also require dedicated action to complement emissions trading. The Alternative Fuels Infrastructure Regulation requires that ships have access to clean electricity supply in major ports. The FuelEU Maritime Initiative¹⁷ will stimulate the uptake of sustainable maritime fuels and zero-emission technologies by setting a maximum limit on the greenhouse gas content of energy used by ships calling at European ports.

How could shipowners handle the upcoming costs regarding the alternative fuels infrastructure? What will be the impact of the The Renewable Energy Directive on Croatian shipowners and on transport users?

¹⁷ https://ec.europa.eu/info/files/fueleu-maritime-green-european-maritime-space_en

In July 2021, European Commission published a Proposal for a Regulation of the European Parliament and of the Council on the use of renewable and low – carbon fuels in maritime transport and amending Directive 2009/16/EC. ¹⁸

1. Regarding current situation in your company, what do you think which renewable and low carbon fuel would be most likely used? **(Exclusively for shipowners)**

2. By 31 August 2024, companies shall submit to the verifiers a monitoring plan for each of their ships indicating the method chosen from among those set out in Annex I to monitor and report the amount, type and emission factor of energy used on-board by ships and other relevant information. (Please check the list of the monitoring elements on page 26/247).¹⁹

In your opinion what should be excluded from the list and why?

¹⁸ https://ec.europa.eu/info/sites/default/files/fueleu_maritime_-_green_european_maritime_space.pdf

¹⁹ https://ec.europa.eu/info/sites/default/files/fueleu_maritime_-_green_european_maritime_space.pdf

- What would you add as a monitoring element?

3. Do you think that shipowners will successfully meet all requirements of the Proposal?
Which requirements will be the hardest to reach?

4. What are suggestions that could be beneficial for shipowners in order to reach requested goals of the Proposal?

5. Do you have anything else to add regarding this topic?