EUROPEAN COMMISSION
DIRECTORATE-GENERAL
CLIMATE ACTION
Directorate B - European and International Carbon Markets
CLIMA.B.3 - International Carbon Market, Aviation and Maritime

European Sustainable Shipping Forum
2nd meeting of the Sub-group on Shipping MRV Verification and Accreditation
Brussels, 28th October 2015
Location: Albert Borschette Conference Centre, room 1A
(Rue Froissart 36, 1040 Brussels)

Welcome and Opening

1. After having adopted the Agenda, the sub-group had a brief discussion and approved the minutes of the 1st meeting.

Task 1: Identification of relevant verification rules

Verification of the emissions report and reasonable assurance

2. A presentation of the concept paper on the options for carrying out verification of the emissions report (ER) and reasonable assurance was made by PwC & partners (**Dennis Mes, PwC**). It provided the background, elements for consideration such as European Regulations (AVR No 600/2012) and International Standards (ISO 14064-3:2006) with the objective of having an harmonized approach between verifiers, as well as backward verification related to the ER. Options were presented to address these matters.

3. Questions for discussion were put forward which led to a thorough, lively and divided debate with the sub-group members feedback as follows:

    - The majority agreed with a simple, pragmatic and harmonised approach that would be applied in a straightforward and practical manner and without bringing in additional burden and complexity.
    - Several members were of the view that there is no need to have additional documentation and verification procedures. In this respect, they recall the 3rd party verification practices being applied to shipping for years that could be of some assistance to this process with reasonable assurance e.g. ISO Standards, Ship Energy Efficiency Management Plan (SEEMP) Quality Management Systems in place like the ISM Code and Rules for Class and Statutory Certification. Furthermore, more relevance should be given to the competence of the verifiers instead of the verification procedure itself; IACS and EMSA's audits on the work performed by a Recognised Organisation (RO), as well as on the competence of its surveyors, were given as examples. Therefore, these

members concluded that neither option 1 nor option 2 would be needed.

- Some members suggested starting by knowing exactly which data is to be verified and then judge about its complexity. Questions about qualification of the process, deadlines for verification, what is the verification plan and its aim, how these data is to be verified and where to set the limits on accuracy, were also raised. In summary, there will be four main elements to be checked (fuel consumption, distance, cargo and time); while distance sailed can be accessed and verified easily, uncertainty values ranging between 2-5% are commonly found in relation to fuel supply, handling and consumption operations i.e. from the delivery barge to the combustion machinery. It was also proposed using the 'tramp shipping' concept as a better reflection of the uncertainty of trade operations with regards to backward verification.
- Other members agreed with option 1, for simplicity and consistency thus recommending using similar approaches of existing EU Regulations such as the aviation ETS. Reference was made to the AVR that allows flexibility while not being too detailed. It was also stated that the verification requirements i.e. procedures and verification plan, would be applied uniformly to verifiers and not to companies. Although ships will have to include all the information in the monitoring plan (MP), the verifier needs to have a systematic approach in place to make sure that the verification is adequately carried out with a reasonable assurance. It was also claimed that these requirements intend to align the verification procedures, add transparency and comparability to the process and consequently ensure a level playing field. And finally,
- Few members did not express preference for any of the options.

4. The Chair, while noting the comments, tried to summarise the discussions and proposed (the contractor) to develop an outline of a minimum set of procedures and use it as the basis for further discussion. Some members react to remind the Chair about the divided audience.

Uncertainty

5. The presentation continued on the subject of uncertainty. The contractor, while introducing the concept of uncertainty, provided commonly used definitions, inherent limitations and errors, as well as the parameters for which it is determined, such as accuracy and precision. It also suggested further elements to consider regarding each fuel monitoring method and its measuring equipment precision. Several options were presented concerning uncertainty and calibration of measurement systems.

6. A presentation on a goal-based approach to fuel and CO_2 emissions monitoring - uncertainty considerations - was delivered by **Tristan Smith**, **IMarEST**, referencing a past IMO submission MEPC

65/INF.3/Rev.1, which provided information relating to a goal-based approach to fuel and CO_2 monitoring, while discussing four possible measurement/monitoring methods (in line with the EU MRV Regulation): Bunker Delivery Notes (BDNs), on-board bunker fuel tank monitoring, flow meters for applicable combustion processes and direct emission measurements. Boundaries, control and elements associated with uncertainty were presented, as well as its sources for each method. A case study on the average and cumulative difference of fuel consumption given by fuel tank plus BDNs and fuel flow meters measurements was showed. Questions were raised by members on which the presenter further informed that although covering 28 ships, it concerned only one operator.

7. Questions for discussion regarding the uncertainty presentation were put forward with the sub-group members feedback as follows:

    - The majority of the members agreed that further analysis is needed in relation to uncertainty.
    - IMarEST recommended: specifying conservative default values as the most straightforward solution, an average +- 10% within a 95% confidence interval should be accepted for uncertainty and cross-referencing i.e. using multiple (combination) of methods. Several members agreed with these recommendations.
    - One member underlined that prudence is necessary if uncertainty is to be taken to a level where it becomes difficult to analyse. It was also reiterated that the need of qualifying all individual steps of the verification process towards a continuous improvement would uncover a very complex and challenging system; something that goes against the basic principles of the EU MRV Regulation.
    - One member again stressed that we should first focus on the specific data/variable process and then deciding on its uncertainty.
    - Several members were once more of the opinion that clear distinction should be made between calibration and maintenance. Moreover, some of these favoured cross-referencing of on-board methods instead of calibration that would require isolated periodic actions by the manufacturers (or their representatives) actions. Also in this respect, other members argued that there is no need for additional requirements and that all the information can be retrieved from on-board operations and proper documentation.
    - The contractor further explained that verifiers should be able to evaluate the risk associated with the CO_2 data being reported and its impact on the overall uncertainty of these reports.
    - The rapporteur intervened and clarified that uncertainty should be linked with the accuracy related to fuel measurement instead of the materiality of the CO_2 emissions reported. To this end, it was important to concentrate efforts on the accuracy the measurement, ensuring that the instrumentation used has met the performance requirements, consequently safeguarding quality and confidence.

8. The Chair took note of the comments and proposed, for the time being, to keep option 1 with an average +/- 10% uncertainty level for all monitoring methods as a starting point, until further analysis would be available. Therefore, by recommending the same approach as IMarEST, i.e. obtaining supplementary data by cross-referencing different fuel measurement methods, invited for additional input/contributions from the sub-group particularly owners/operators. It would be appropriate that the monitoring subgroup takes over this discussion.

Materiality

9. The presentation continued on the subject of materiality. The contractor provided a background on this concept applied to a phased verification process: 1) Planning, 2) Performing the verification, 3) Evaluating the effect of identified and uncorrected misstatements on the ER and 4) Forming the verification statement. Reference to EN ISO 14064:3 and ISAE3410 with regards to materiality in the context of GHG emissions. It also informed about the common and widely accepted materiality level for GHG statements (e.g. defined in the GHG protocol) of 5%, as well as other relevant elements that should be taken into consideration. Options were presented in respect to the determination of the materiality level.

10. Questions for discussion were put forward with the sub-group members feedback as follows:

    - Adding to the presentation, further explanations/clarifications were given by the contractor and rapporteur. While uncertainty is about the precision of the measurement methods, materiality is focused on setting a range of acceptable errors. Even if all procedures are followed, there will be always a tolerable risk of undetected mistakes to occur, and that is the function of materiality level. This concept should be linked to the verification plan; tighter the materiality level, higher the number of sampling needs. Verifiers will assess the operator's data, cross-check with other sources and, by using a risk-based analysis, would define how much information is needed to meet his expectations; materiality will then set the number of samplings to confirm it.
    - Most of the members did not understand the concept of materiality despite the presented definitions and further explanations given. In result, they requested further clarifications.
    - Some members questioned about what would be the means to be used by the verifiers to judge the level of sampling/materiality, particularly if some of them are not familiar with shipping. Another member also asked if the high operational variations in shipping could be compared to those found in aviation.

11. The Chair, while recalling that the majority would prefer to set the materiality level, also noted the difficulties shown by the members in understanding this concept. Therefore, recommended that the Working

Paper should provide further clarity on the meaning of materiality, how it would work in practice and a proposal for a level of materiality, having in mind international standards already applied or foreseen in the sector.

Misstatements and non-conformities

12. The presentation continued on the subject of misstatements and non-conformities. The contractor provided the background first by dividing misstatements into non-material misstatements and material misstatements and then differentiating between non-conformities and non-compliances. It also presented existing rules and other relevant elements to be considered. Several options were presented in relation to misstatements and non-conformities.

13. Questions for discussion were put forward with the sub-group members feedback as follows:

    - One member requested clarification on whether the verification report (VR), including all the information regarding to misstatements and non-conformities would be submitted to the Commission, or if it would be only the assurance report? If the whole document is to be sent, then *Article 22* of the AVR is relevant; otherwise it's not.

14. The Chair clarified that, although the EU MRV Regulation has certain provisions with regards to the VR, it does not specify if it is to be sent to the Commission. However, the Regulation states that this report should specify and reflect the activities that were carried out by the verifier. It will also be discussed later. Thus, the Working Paper will have a proposal on how to deal with misstatements and non-conformities.

Site Visits

15. The presentation continued on the subject of site visits. It started with the background on definitions and the reasoning why to carry out site visits, as well as on the activities performed during these and associated challenges found. Existing rules and other relevant elements to be considered were introduced. Several options were presented in relation to these audits/visits covering location, schedule and time allocation (man-hours).

16. Questions for discussion were put forward, which led to an intensive debate, with the sub-group members feedback as follows:

    - The majority agreed with a non-mandatory requirement concerning site visits i.e. on-board verification. Instead, a visit to the head office of the shipping company would be preferable, or even a combination between this last and option 3 (remote verification). Some members stated that, having in mind the scope

of this verification, in the end it would always be something to be discussed and agreed between the company and verifier.

- One member, while providing his recollection of the previous discussions held in July, that there should be no mandatory requirements in this respect and that the majority of the members agreed that the required documentation should be ashore. The Chair, clarified that there were no specific discussions on site visits also excluding the possibility that, according to the risk-assessment, verifiers might have to go on-board and in which cases and to which extent those visits would have to be performed.
- One member echoed that this requirement should be linked and dependent from the MP and the results from the risk-assessment.
- One member questioned about the procedures to be followed in case of a change of the verifier or of a MP modification.
- Some members raised concerns about the financial and administrative burden associated. They were of the view that visits/audits should be aligned with the existing periodical surveys required under the ISM Code together with the risk-assessment to be made. Moreover, it would become significantly easier if both the International IMO Data Collection System and the EU MRV would be aligned, as the ISM Code includes *instructions and procedures to ensure safe operation of ships and protection of the environment in compliance with International and Flag State legislation*.
- One member argued against the proposed time allocation making reference to existing periodic statutory surveys required by International Instruments that usually take between 5 to 10 days; thus, in order to check fuel consumption, distance and cargo it would seem quite excessive to allocate so many man-hours.
- One member, while recalling previous discussions, was of the opinion that a risk assessment should be carried out on a fleet-level towards time and cost effectiveness. The Chair reminded that the EU MRV Regulation provisions such as the verification of the ER, are to be applied to each individual ship; however, there could be situations when verifiers, while checking several ships i.e. a fleet from the same company, would decide for a more lean approach, having in mind the risk-analysis performed.
- One member suggested that Class Societies could endorse the information being provided by the companies to the verifiers.
- Other members proposed a clear distinction between on-board and head office site visits. They also indicated that, in order to achieve a reasonable level of assurance based on the results of the risk-assessment, sampling could be made, even though all procedures would be in place and properly documented. Furthermore, a simple document verification would not suffice to assure the verifiers that a proper job is being done by the companies. In addition, it was also mentioned that it should be confirmed that MP is accurately reflecting the situation on-board.
- The technical secretariat intervened by referencing the verification procedures set in *Article 15* (paragraphs 1 to 4), with regards to

the risk-assessment and the need to carry out further analysis if significant deviations are found i.e. on-board visits/spot checks.

17. The Chair, having in mind the comments made, concluded that it is fundamental to understand that site visits would be based on the outcomes/results of the risk-assessment. Therefore, an option that would combine other options should be kept for further discussion and be reflected in the Working Paper.

Content of the verification report

18. The presentation continued on the subject of the content of the VR. The contractor provided the background in this regard, namely the requirements applied to both companies and verifiers set in *Article 13* of the EU MRV Regulation, as well as other elements to be considered such as the format of such report. Several options were presented regarding the content of the VR and its submission.

19. Questions for discussion were put forward with the sub-group members feedback as follows:

    - Several members raised questions on the need and purpose of submitting the VR to the Commission, to any other party rather than the company or even to be published. One member said that the content would always depend on who might be seeing it.
    - Both the Chair and rapporteur clarified that the VR is to be issued by the verifier to the company and not to be published; the question was if it could also be sent to the Commission.
    - Some members believed that the VR could be useful for the NABs to confirm that the accredited verifiers are doing a proper job.
    - Most members agreed to develop a list of minimum requirements to be communicated through a uniform format. While some do not see an Excel template as rather problematic, one member recommended the use of an efficient on-line tool to handle all these data if there is willingness to manage it correctly.

20. The Chair, having in mind the comments and discussions, concluded that the submission to the Commission option should be dropped for the time being, that there were convergent views on the need to have minimum requirements for the VR which also overlapped with the communication form (template *vs* on-line tool). Therefore, minimum requirements are to be developed in the Working Paper and then see how discussion evolves in terms of which communication form is decided.

Communication between companies, verifiers and the Commission

21. A presentation on the communication activities and data/information exchange between actors, encompassing the use of automated systems and formats i.e. electronic templates as per the EU MRV Regulation was

delivered by **Miguel Madeira**, **EMSA**. It covered an overview of the role of each 'actor' (Companies, Verifiers, EC, Member/Flag Sates, National Accreditation Bodies and General Public) and presented two possible approaches for their mandatory and possibly voluntary interaction according to the provisions of the same Regulation 1) 'Excel Template' and 2) 'Integrated web-based IT tool'. It also included a summarized *pros and cons* analysis.

22. Several questions were put forward with the sub-group members' feedback summarised as follows:

    - Several members, while noting the attractiveness of option 2 (Integrated web-based IT tool) believe that further information is required to decide to which extent the tool is really needed. To this end, specific questions were raised on: data access, management, control and disclosure, security aspects particularly in view of sensitive information to be sent to a centralised system (e.g. voyage basis information), clarity on what is mandatory and voluntary, costs, complexity and additional administrative burden to be expected.
    - Others welcomed and recognised the apparent simplicity and potential advantages of such an administration/facilitation tool through the use of a centralised system, namely for actors that would have to manage hundred/thousands of ships and exchange information 'in bulk' with several parties. Data logging and recording seemed also interesting.
    - Possible usefulness towards a harmonised implementation and enforcement of the EU MRV Regulation was also mentioned, particularly from a Member State perspective.
    - One member proposed to set up a task-force for discussing this particular item i.e. centralisation of EU MRV information.

23. Having in mind the comments and the debate, the Chair suggested that further consideration should be given to both approaches and invited for written comments to the presentation, particularly on the questions that EMSA put forward.

Recommendations for improvements

24. The presentation continued on the subject of recommendations for improvements. The contractor provided the background with the objective of improving the monitoring and reporting process, as well as other elements to be considered such as independence and impartiality. Several options were presented regarding this matter.

25. Questions for discussion were put forward with the sub-group members feedback as follows:

- One member expressed doubts on the need of standardised rules, since recommendations are not mandatory, it should be left to the professional judgement of the verifier.
- There has been some confusion between the concept of advisory work that branches of the verifier company could possibly offer and the concept of the recommendations for improvements according to the Regulation. Clarification was provided by the Commission that recommendations for improvements could be made by the verifier at the end of the verification process, to be included in the verification report (Article 4.7), on areas for improvement of the monitoring and reporting process of the company.
- Rapporteur further clarified that the verifier can state areas for improvements but cannot provide specific solutions (as per ISO standard EN 14065); moreover the verifier has to prove that there is no conflict of interest (e.g. verifier cannot suggest to change the monitoring methodology that has been assessed).
- A member further elaborated on the fact that the verifier cannot provide advice on the monitoring plan it has assessed, this is also the case under the ISM Code.
- The consultant added that recommendations for improvements can be a mean to improve the monitoring and reporting process so as to prevent misstatements in future reporting (verification would then be easier and less costly).
- A member referred to the example of the AVR as a good blueprint to follow.
- Another member suggested that verifiers could provide insights on best practice to the company, due to their experience with more than one company.

26. The Chair concluded that the Working Paper should include clarification on what recommendations for improvements are and their purpose, including elaborating on the suggestion that they could provide examples of best practises.

NABs surveillance to confirm continuation of verifiers' accreditation

27. The presentation continued on the subject of NABs surveillance to confirm continuation of verifiers' accreditation. The contractor provided the background and other relevant elements for consideration such as quality monitoring and interval between surveillance assessments. Several options were presented regarding these matters.

28. Questions for discussion were put forward with the sub-group members feedback as follows:

- EMSA's surveillance works for recognised organisations was mentioned as an example.

- Rapporteur clarified that the international standard EN ISO 17011 should be the basis for organising harmonised surveillance and the example of other sectors of accreditation was provided where surveillance happens on an annual basis.
- One member informed that some classification societies are already accredited under the GHG Protocol.

29. The Chair concluded that in the Working Paper an approach following EN ISO 17011 will be proposed.

Communication between NABs and the Commission

30. The presentation continued on the communication between NABs and the Commission. The contractor provided the background and other relevant elements for consideration such as the need for communication about the status (and potential problems) of the accreditation of verifiers and their identification. Several options were presented regarding these aspects.

31. Questions for discussion were put forward with the sub-group members feedback as follows:

    - One member expressed the opinion that a common list of accredited verifiers provided and updated by the EC would be beneficial, favouring a centralised approach.
    - Another member appreciated the suggestion by EMSA that an integrated IT tool could contain such a list.
    - Rapporteur favoured the approach followed under the EU ETS, where the EA provides a link to the national NABs websites, where the list of accredited verifiers by the relevant NAB can be found.

32. The Chair concluded that option 3 proposed in the Concept Paper should be further elaborated in the Working Paper, including two possibilities: link from the EA website and list available in the integrated IT tool.

Concluding Remarks

33. The Chair concluded the meeting with a list of actions and responsibilities as follows:

    - The minutes of the meeting will be provided by the technical secretariat **EMSA as soon as possible**.
    - **Members** are invited to continue providing written comments on all the questions put forward in the relevant sections of the concept paper, as well as inputs from this meeting, and also provide examples of relevant best practices from their experience in other contexts with the verification and accreditation issues discussed. **Deadline of 13 November**.
    - An e-mail will be circulated **later this week** with the presentations delivered that have not been sent before.

- A first draft of the Working Paper on verification and accreditation will be prepared and circulated **ahead of the third meeting** (**January**), having in mind the above mentioned feedback and under the responsibility of the **rapporteur** supported by the technical secretariat **EMSA** and the consortium **PwC & partners**.
- The Chair invited the members to submit suggestions for presentations at the next meeting. In addition, further thoughts will be given to the idea to start collecting data for further analysis on uncertainty and information/requests will be communicated by email after the meeting.
- The next meeting of the sub-group will be on **20 & 21 January 2016 (one and a half day)**. More details will be forwarded to the members closer to the event.
- Finally, the Chair thanked the members for the intensive discussions in result of their active participation and short interventions during the meeting.

AOB

34. The following points were raised:

- One member suggested having a MP per company and not per ship, underlining the need of flexibility for large companies which manage many similar ships. The Commission clarified that the Regulation requires a ship-specific MP independently of the fact that measures simplifying administrative burden could be envisaged.
- A pre-defined MP template will be specified by technical legislation independent from the possible development of an integrated IT tool with a voluntary module on the MP developed by EMSA.
- One member mentioned the example of the company plan under the ISM code, where the plan is related to the company but it includes ship specific appendices. Another member presented the idea of a MP for the entire fleet where each ship is specified, but the information for the company is inserted only once. These suggestions were welcomed and the Chair concluded that this latter option should be further investigated.

[Signed]
Carlos Pereira - EMSA (Technical Secretariat)