



MARITIME TECHNOLOGY COOPERATION CENTRE IN THE PACIFIC (MTCC-PACIFIC)

CAPACITY BUILDING FOR CLIMATE MITIGATION IN THE MARITIME SHIPPING INDUSTRY
THE GLOBAL MTCC NETWORK (GMN) PROJECT

Samoa Virtual National Workshop for Domestic Ship Operators on MARPOL Annex VI

10th - 11th December 2020



HOST INSTITUTIONS
OF MTCC-PACIFIC



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EXECUTIVE SUMMARY

The second follow up virtual National Workshop for Domestic Ship Operators on MARPOL Annex VI was held virtually by the MTCC-Pacific staff based in Suva, Fiji and Samoan maritime stakeholders at the Samoa Ministry of Works, Transport, and Infrastructure (MWTI) conference room in Apia, Samoa on the 10th and 11th of December 2020. The meetings were attended by representatives from the MWTI, The Samoa Shipping Corporation (SCC) and the Samoa Ministry of Natural Resources and Environment (MNRE). The workshop participants on day one comprised of 5 males and 3 females and on the second day, comprised of 6 males and 2 females. The list of NW participants is attached in Annex 1.

The purpose of the virtual workshop was to recap the first Samoa national workshop outcome, provide an update on the MTCC-Pacific project on the solar photovoltaics (PV) system onboard Lady Samoa III and provide information to the participants on some of the progressive technical tools to progress toward energy efficient operations of ships (including the knowledge of the benefits of MARPOL Annex VI with particular attention to Ship Energy Efficiency Management Plan (SEEMP) and the Energy Efficiency Operational Indicator (EEOI)). The national workshop agenda is attached in Annex 2.

The virtual workshop was held in two parts over a period of two days; the first set of sessions on Day 1 consisted of MTCC-Pacific presenting via zoom on summarizing the first National Workshop outcome which was held in Apia, Samoa, MTCC-Pacific Project Updates, MARPOL Annex VI, Chapter 4 on Ship Energy Efficiency Management Plan (SEEMP), MARPOL Annex VI, Chapter 4 on Energy Efficiency Operational Indicator (EEOI) and the overall benefits and knowledge of MARPOL Annex VI. The second set of sessions on Day 2 consisted of an Overview of the Safety Management System (SMS) and the Pacific Islands Domestic Ship Safety (PIDSS) project update. This was followed by an update from Samoa Shipping Corporation on the Pilot Project onboard Lady Samoa III. The workshop ended with an update from the Samoa Women in Maritime Association and this was followed by further discussions.

These further discussions related to the specifics of both the SEEMP and EEOI implementation together with the continuity of the MTCC-Pacific project where most ship owners and operators are showing interest in integrating the solar PV system onboard their vessels to reduce both the operational costs and Greenhouse Gas emissions. Workshop participants commended MTCC-Pacific for engaging in such an innovative project in Samoa and also pledged their full support on any future collaborations with the MTCC-Pacific and also nationally to ensure a reduction of GHG emissions from the maritime sector.

All Workshop presentations are attached in Annex 3 in consecutive order as outlined in the Agenda.

INTRODUCTION

The International Maritime Organization (IMO) through the MARPOL Convention has set international rules and guidelines for the reduction of Greenhouse Gas emissions from the maritime and shipping sector. This led to the recent integration of Annex VI to the MARPOL Convention which deals particularly with the maritime GHG emissions. Operation tools that the MARPOL Annex VI uses in order to regulate and reduce global maritime GHG emissions include the Ship Energy Efficiency Management Plan (SEEMP) together with the Energy Efficiency Design Index (EEDI) and the Energy Efficiency Operational Index (EEOI). An understanding of SEEMP and EEOI forms the basis for its smooth implementation where ship owners and ship operators can integrate and apply these technical tools in order to cut operational costs while at the same time emitting less GHG into the atmosphere.

The second follow-up workshop was carried out virtually to introduce the maritime stakeholders in Samoa to the specific details of MARPOL Annex VI which included in particular the SEEMP and EEOI implementation as two of the major instruments for the reduction of GHG emissions in the maritime sector. The workshop forms part of the MTCC-Pacific deliverables.

The Workshop began with an opening remarks and a welcome note from the Samoa Shipping Corporation (SCC) in Samoa followed by presentations from MTCC-Pacific office and other joint presentation from SCC and MTCC-Pacific. As per the workshop agenda, the main workshop presentation covered the following: Recap of the Samoan first National Workshop Outcome, MTCC-Pacific Project Updates, Safety Management System, MARPOL Annex VI – SEEMP, MARPOL Annex VI – EEOI, Sulphur Limit, Samoa SMS and Data Collection Update, Lady Samoa III Pilot Project Update, and Update from Samoa Woman in Maritime Association.

The biggest challenge faced by MTCC-Pacific was the adverse weather in Samoa and internet connectivity. Intermittent connectivity posed a challenge for video interaction. The workshop went ahead and started late but covered all the topics on the agenda.

Several tweets/retweets and posts/re-posts were also sent out on social media. Attached in Annex 5 are examples of communication and visibility activities that took place during the workshop.

The workshop ultimately fulfilled the vision of the IMO implemented and European Union (EU) funded Global MTCC Network (GMN) for climate change mitigation established to assist the maritime transport sector of small island developing states (SIDS) and least developed countries (LDC).

VIRTUAL NATIONAL WORKSHOP

The following are the NW presentations presented by the three MTCC-Pacific trainers and the Maritime Affairs Team Leader as per the Agenda:

1. Brief Opening Remarks

The workshop was opened by a welcome from the Head of MTCC-Pacific Dr. Zullah Mohammed followed by brief administration remarks including format of presenting and participation. The Assistant Chief Executive Officer of the Maritime Division Ms. Taimalelagi Anastacia Stowers took the lead in introducing the participants in Samoa and made it clear that most participants were on a tight schedule and hence the workshop was split into two days to ensure maximum participation..

Ms. Stowers expressed her gratitude on the continuous support and capacity building by the SPC and MTCC Pacific Team. She further expressed her gratitude to the domestic ship operators for taking time to attend the workshop to learn and share ideas and knowledge in relation to the shipping industry combating the challenges of climate changes.

2. Recap of Samoa National Workshop Outcome

The Head of the MTCC Pacific recalled the first national workshop held in September 2019 in Apia Samoa and draw attention to the Workshop Outcome Document in particular on data collection and on energy efficient operations. The Head of MTCC-Pacific also acknowledged the ship operators for their continued role in ensuring the implementation of SEEMP onboard their vessels. The Paris Agreement and importance of implementing the Nationally Determined Contributions (NDCs) as part of each country's effort to reduce and mitigate GHG emissions was also highlighted during the recap. The progress of MTCC-Pacific was also highlighted during this presentation where the various regional activities and workshops that were delivered such as the National Workshops and the solar PV system projects and Port energy audits were briefly discussed.. The future of MTCC-Pacific was also discussed in brief where the participants were informed of the recent GMN Project extension that will end in March 2021 and the possibilities of its continued operations beyond the year 2021.

3. MTCC Pacific Project Updates

The presentation provided a snapshot of the progressive pilot projects both in Vanuatu and Samoa. The projects demonstrate the application of maritime solar energy in PICTs vessels with the view of reducing greenhouse gas emissions and progressing low-carbon development in Pacific maritime transport.

The following discussions were noted:

- Process involved in identifying technology and the measures chosen for the vessel in Samoa
- Collection of fuel oil data from the vessels to inform quality analysis and pay back savings
- Reiterating that the MTCC Pacific will come to a closure in March 2021 however, MTCC Pacific is looking at viable opportunities with other development partners to continue similar project activity.
- Criteria employed in identify vessels to be considered for the pilot project rested largely on effective implementation of the Safe Operation Plan (SOP), consistence data collection and a practical on-board assessment of ships operations including prevention maintenance plan and documentation.
- Process engaged in the installation of Proper Boss Fin Cap (PBFC) that is considered as energy efficiency technology, however the challenge remains inthe acquisition of the ships drawings, and the fact that the propeller offset table in most ships operating in the country do not have this due

to lack of proper record keeping and storage management practices. The PBCF is not an off the shelf technology.

4. MARPOL Annex VI- Chapter 4 SEEMP

The presentation provided a general snapshot of SEEMP Guidelines (MEPC 213 (63)), main Elements and Components of SEEMP, and the implementation aspects of SEEMP. It reinforces the importance of the planning phase of SEEMP and the continual improvement nature of SEEMP that is similar to that of the Plan, Do, Check, Act (PDCA) cycle.

5. MARPOL Annex VI- Chapter 4 EEOI

The presentation provided a brief overview of EEOI Guidelines (MEPC 1/ Circ. 684) and calculations.

6. Overview of Safety Management System (SMS) and Pacific Islands Domestic Ship Safety (PIDSS) Update

The Safety Management System (SMS) is a systematic approach to managing safety on board a vessel which all domestic vessels must have to ensure the safety of vessels and the people on board. The presentation on Safety Management System (SMS) goes in conjunction with the Pacific Islands Domestic Ship Safety (PIDSS) programme. The presentation provided a brief background information on the Pacific Islands Domestic Ship Safety Programme (PIDSS), the components or areas of focus that make up this programme, brief overview of the SMS and, Safe Operational Plan (SOP) advocated in the PIDSS Programme, and Progress of PIDSS in Samoa (although Samoa is not directly involved with the PIDSS project).

The following discussions were noted:

- Role of auditing the safety management system and how it is conducted,
- The overall shipping companies and/or vessels that have drafted their SOPs and those that have not,
- The need for each vessel to have its own SOP to ensure an effective SMS,
- The role of SCC in ensuring that shipping companies have a SOPs onboard and to carry out audits if the need arises, and
- The feasibility of external audits by SPC and how they can be conducted given the border closures due to covid19 lockdown.

7. Samoa Shipping Corporation Pilot Project Update

This presentation was co-presented by MTCC Pacific and Samoa Shipping Corporation on the status and updates of the pilot project that was done onboard the Lady Samoa III. It provided some insights into the status of the solar panels and LED lights that were installed on the vessel and on Greenhouse Gas (GHG) emission reduction and fuel savings from the pilot project.

The following discussions were noted:

- Ministry of Works, Transport, and Infrastructure (MWTI) in Samoa suggested that all fuel consumption data obtained from Lady Samoa III should be delivered to them by the Samoa Shipping Corporation (SSC) so that they can review the data being provided and approve if the data is legible to use,

- SSC asked if MTCC-Pacific could edit the fuel consumption data template and allow more space to record readings from the flow meter,
- SSC encountered some hiccups in their operations and hence the fuel consumption data for 2020 was not well documented.
- The solar PV system onboard the Lady Samoa III seemed to be in good condition from the latest updated photos that were provided by the SSC to the MTCC-Pacific office.

8. Update from Samoa Women in Maritime Association

This presentation was made by the President of the Samoa Women in Maritime Association. It provided the progress and update on Samoa Women in Maritime Association.

The following discussion was noted:

- Samoa Women in Maritime (SWIMA) requested MTCC-Pacific and SPC for any opportunities to engage their members in further capacity building exercises and trainings should any become available by MTCC or SPC in the near term.
- SWIMA also encouraged their members to attend further trainings and capacity building exercises abroad e.g. Class 3 and Class 2 ratings in New Zealand.

9. Discussions

The main discussions that were made during this two-day workshop revolve around:

- The next phase of the solar PV system project that was done onboard the vessel Lady Samoa III but more focused on the greening of Ports,
- The need for doing ship and port audits remotely,
- The need for minor adjustments to the fuel consumption template so that all the information from the vessel can be entered correctly into the spaces provided by the template,
- Samoa not being part of the Pacific Blue Shipping Partnership due to other commitments, and
- The need for more Samoa women to be trained and educated in the maritime field both now and in the future.

Most of the main questions that were raised during the Q&A session at the end of the workshop were related to the continuity of the MTCC-Pacific project and the second phase of the project.

10. Outcomes, Takeaways and Conclusion

The main outcomes and takeaways from the workshop were that workshop participants:

- Were introduced to the MARPOL Annex VI and now have working knowledge of what it entails.
- Have a clearer understanding of SEEMP and EEOI, what each of them entails and how to integrate these into their local operations in Samoa.
- Were introduced to the fuel consumption template and the need to collect fuel consumption data to help quantify Carbon Dioxide levels in the atmosphere and adhere to NDCs in the maritime sector.
- Know the importance of SOPs and alternative energy sources e.g., solar PV system that can be used to increase business efficiency whilst decreasing costs incurred using fossil fuel as the main fuel.
- Got introduced to the virtual workshops which can become the norm if the covid-19 situation is prolonged.

The workshop participants were satisfied with the workshop presentations and discussions and this was reflected in the Q&A and discussions after the workshop. The workshop participants were introduced to

the idea and need of implementing SEEMP and EEOI and further appreciated the combined efforts through the Nationally Determined Contributions (NDCs) to achieve the outcomes of the Paris Agreement. The workshop ended with a broader outlook from the maritime sector into the global industry at large and the need to decrease GHG emissions into the atmosphere in order to sustain life on earth and especially to safeguard the livelihoods of Pacific Islanders who are particularly susceptible to the impacts of global climate change.

ANNEXES

Annex 1 – List of Participants

Annex 2 – Agenda

Annex 3 – NW Presentations

Annex 4 - Evaluation Analysis

Annex 5 – Photos

Annex 6- Communication and Visibility