

## FIRST NATIONAL WORKSHOP ON ENERGY EFFICIENT OPERATION OF SHIPS

Apia, Samoa, 12-14 June 2018

### OUTCOMES

1. The First National Workshop on Energy Efficient Operations of Ships was held at Secretariat of the Pacific Regional Environment Programme (SPREP) in Apia, Samoa from 12-14 June 2018. The workshop was coordinated and facilitated by the Maritime Technology Cooperation Centre in the Pacific (MTCC-Pacific) and attended by representatives from the Ministry of Works, Transport and Infrastructure (MWTI) representing the maritime administration and including the Samoa Shipping Corporation (SSC), Samoa Ports Authority (SPA), National University of Samoa School of Maritime Training, and Ministry of Police (Maritime). The list of participants is attached in Annex 1.
2. MTCC-Pacific is hosted by the Pacific Community (SPC) in collaboration with SPREP and forms part of the Global MTCC Network (GMN), a project implemented by the International Maritime Organization (IMO) and funded by the European Union (EU) with the aim of building capacity of small island developing states (SIDS) and least developed countries (LDC) for climate mitigation in the maritime industry.
3. The welcoming speech was delivered by the Samoa's Acting Chief Executive Officer of MWTI, Mr. Nanai Junior Saaga, said *"the maritime sector is vital for Samoa's transportation and it is important for Samoa to take advantage of the workshop and build capacity for climate mitigation. Samoa is impacted by global activities but we have to make a strong stand and be resilient to climate change. I thank MTCC-Pacific for coming here and hope they will continue to provide this kind of workshop to inform and educate technical staff in Samoa. As they say in Samoa "Laititi ae maini" meaning "small but effective contribution", I encourage each and everyone here to play their part in making small and effective contributions."*
4. In his opening address, MTCC-Pacific (Maritime) Transport Greenhouse Gas Advisor recapped the commitments from MTCC-Pacific, it's Host Institutions and GMN partners, to assist the Pacific region in climate mitigation in the maritime transport sector and was *"pleased with the commitment shown by Samoa and confident that the knowledge shared during this week will make a positive contribution toward greenhouse gas emission targets"*.
5. The purpose of the workshop is to gather the relevant maritime transport sector stakeholders from the government and agree on measures to progress low carbon maritime transport in Samoa that contributes to the Strategy for the Development of Samoa (SDS) 2017-2020 and achievement of the sustainable development goals.

**The participants:**

6. Agreed to take relevant action to mitigate greenhouse gas (GHG) emissions and create awareness among the maritime transport sector in Samoa on the benefits of ship energy efficient operations (SEEO) toward reduction in fuel oil consumption and GHG emissions, and uptake of renewable technologies;
7. Recognize the drivers, needs, barriers and relevant actions stated in Annex 2 that include:
  - i. Legislation, Regulations and standards for domestic ships including training on air pollution prevention and energy efficiency;
  - ii. Data base development to capture baseline data;
  - iii. Access to air monitoring equipment;
  - iv. Capacity Building e.g. HR development of Awareness and Training opportunities;
  - v. Cost and quality of fuel; and
  - vi. Planned maintenance.
8. Agreed to participate and be involved in MTCC-Pacific pilot-projects on energy efficient operations of ships and data collection that will assist in implementing immediate actions adapted to domestic ships in Samoa and in the four ports;
9. Agreed to collect and share relevant data on fuel oil consumption and request MTCC-Pacific to provide templates and assist in collection and reporting, ensuring confidentiality and accessibility of information;
10. Agreed to implement Ship Energy Efficiency Management Plan (SEEMP) on board domestic ships in Samoa; and
11. Requested MTCC-Pacific to conduct a follow-up workshop to present and discuss progress in measures implemented in 2017-2018 related to energy efficiency and data collected from Samoan operated vessels and Samoa Ports Authority.

14 June 2018

## Annex 1 – List of participants

#	Name	Job Title	Organisation	Email Address/ Phone Number (+685)
1	Nanai Junior Saaga	Acting CEO	Ministry of Works, Transport & Infrastructure	7748955
2	Kalameli Seuseu-Soo	Acting CEO Legal	Ministry of Works, Transport & Infrastructure	28688
3	Makerita Atonio	Acting CEO Maritime (Principal Shipping Officer)	Ministry of Works, Transport and Infrastructure	<a href="mailto:makerita.atonio@mwti.gov.ws">makerita.atonio@mwti.gov.ws</a> / 28688
4	Tapaga Collins	Principal Surveyor	Ministry of Works, Transport and Infrastructure	<a href="mailto:tapaga.collins@mwti.gov.ws">tapaga.collins@mwti.gov.ws</a> / 7780872
5	Ioane Efeso	Shipping Officer	Ministry of Works, Transport and Infrastructure	<a href="mailto:ioane.efeso@mwti.gov.ws">ioane.efeso@mwti.gov.ws</a> / 7249290
6	Sonny Brown	Head of School	Maritime School (National University of Samoa)	<a href="mailto:s.brown@nus.edu.ws">s.brown@nus.edu.ws</a> / 7611225
7	Faataui Audoa Tuiletufuga	Nautical Lecturer	Maritime School (National University of Samoa)	<a href="mailto:a.tuiletufuga@nus.edu.ws">a.tuiletufuga@nus.edu.ws</a> / 7511462
8	Sanele Pio Tavita	Constable	Police Maritime Wing	<a href="mailto:tavita.sanele@gmail.com">tavita.sanele@gmail.com</a> / 7681767
9	Alaifatu Saisola	Marine Captain	Samoa Port Authority	7780350
10	Ielome Mulumulu	Deputy Port Master	Samoa Port Authority	<a href="mailto:ierome@spasamoa.ws">ierome@spasamoa.ws</a> / 7704811
11	Mavaega Mupo	Senior Electrician	Samoa Port Authority	7704844
12	Ioritana Maliko	Marine Engineer	Samoa Port Authority	7704813
13	Viane Tavita	Captain	Samoa Shipping Corporation	<a href="mailto:tavitaviane@gmail.com">tavitaviane@gmail.com</a> / 7775091
14	Elisala Faleafa	Able body Seaman	Samoa Shipping Corporation	<a href="mailto:elisalafaleafa09@gmail.com">elisalafaleafa09@gmail.com</a> / 7242810
15	Mika Matamua	Ships Officer	Samoa Shipping Corporation	7523322
16	Ioane Siatua Fomai	Maritime Manager	Samoa Shipping Corporation	<a href="mailto:pipi@samoashipping.com">pipi@samoashipping.com</a> / 7577672
17	Pisi Evile	Officer on Ship	Samoa Shipping Corporation	7233195
18	Siolame Salima	Chief Engineer	Samoa Shipping Corporation	7514091
19	Siutavae Lotoa	First Engineer	Samoa Shipping Corporation	7759441
<b>ORGANISER</b>				
1	Mark Davis	Transport Green House Gas Adviser	MTCC-Pacific	<a href="mailto:markd@spc.int">markd@spc.int</a>
2	Zullah M. A	Maritime Industry Energy Efficiency Officer	MTCC-Pacific	<a href="mailto:zullahm@spc.int">zullahm@spc.int</a>
3	Anthony Talouli	Pollution Adviser	SPREP	<a href="mailto:anthonyt@sprep.org">anthonyt@sprep.org</a>
4	Lore Croker	Administration & Information Assistant	MTCC-Pacific	<a href="mailto:lore@spc.int">lore@spc.int</a>

## Annex 2 – Matrix of drivers, needs, barriers and relevant actions

Drivers	Needs	Barriers	Relevant action
<i>Samoa National Workshop on Energy Efficient Operations of Ships, Apia, Samoa, 12-14 June 2018</i>			
Legislation, Regulations and standards for domestic ships including training on air pollution prevention and energy efficiency	Awareness of maritime compliance through 'MWTI'.	<ul style="list-style-type: none"> <li>Lack of support to provide information and technical tools on energy efficiency.</li> <li>New amendments of MARPOL Convention not reflected in the national legislation</li> </ul>	<ul style="list-style-type: none"> <li>Technical support and capacity building provided by MTCC-Pacific, and SPC to implement adapted measures.</li> </ul>
Data Collection Database	<ul style="list-style-type: none"> <li>Develop database to capture maritime data</li> <li>Baseline data collection (DC) of FOC to show GHG emissions from domestic shipping.</li> <li>Proper recording of the fuel on-board.</li> </ul>	<ul style="list-style-type: none"> <li>Key performance indicators e.g. for the EEOI are not known/understood</li> <li>Lack of knowledge on the benefits and importance of data logging.</li> <li>Proper voyage* report/log- FOC (tonnes), weight (tonnes of cargo, pax &amp; Ballast Water), time (hr) and distance (nm). *port-to-port.</li> </ul>	<ul style="list-style-type: none"> <li>Improve practices &amp; establish SEEMP under the current SMS program.</li> <li>MTCC-Pacific to provide EEOI training.</li> <li>Captain should conduct regular toolbox meetings prior to departure of vessels, including reminding crew in regards to the importance of SEE &amp; GHGs.</li> <li>Implement energy management with the support of SPC (MTCC-Pacific).</li> </ul>
Monitoring equipment	<ul style="list-style-type: none"> <li>Quantify air pollution around ports.</li> <li>Suitable, simple and cost effective measure of emission at ports.</li> </ul>	<ul style="list-style-type: none"> <li>No equipment or expertise to use and understand monitoring data.</li> <li>Cost and effective use.</li> </ul>	<ul style="list-style-type: none"> <li>Acquiring air pollution monitoring equipment and specialised training.</li> </ul>
Capacity Building e.g. HR development of Awareness and Training opportunities	<ul style="list-style-type: none"> <li>HR development.</li> <li>Building maritime expertise within the maritime transport sector.</li> </ul>	<ul style="list-style-type: none"> <li>Insufficient local expertise.</li> </ul>	<ul style="list-style-type: none"> <li>Building an adaptive capacity that will ensure application of SEEMP measures on board domestic vessels.</li> <li>SPC-SPREP support for increasing trained personnel.</li> </ul>
Cost and quality of fuel	<ul style="list-style-type: none"> <li>Fuel standards and quality control</li> </ul>	<ul style="list-style-type: none"> <li>Only one oil company.</li> <li>Lack of fuel quality testing equipment.</li> </ul>	<ul style="list-style-type: none"> <li>On-board filtering equipment (MTCC-Pacific).</li> <li>Fuel monitoring.</li> <li>Pacific Petroleum Services (PPS) provide regular QA data.</li> </ul>
Planned maintenance	<ul style="list-style-type: none"> <li>Capacity of slipway (1000 tonnes).</li> </ul>	<ul style="list-style-type: none"> <li>Cost of using American Samoa (USD).</li> </ul>	<ul style="list-style-type: none"> <li>To increase size of slipway, technical maintenance capability or access to cost effective slipways e.g. Fiji.</li> </ul>
Insufficient specialised staff	<ul style="list-style-type: none"> <li>Lack of training.</li> <li>Retention of experienced staff.</li> </ul>	<ul style="list-style-type: none"> <li>International development organisation (IMO, etc.) training.</li> </ul>	<ul style="list-style-type: none"> <li>Request MTCC-Pacific for tailored trainings.</li> </ul>