MTCC- Pacific Pilot Project 1 Update
“Uptake of Ship Energy Efficient Technologies and Operations”
(Domestic shipping and ports)

Presenter 1: Ore Toua
Maritime Training Adviser

Presenter 2: M. A. Zullah, PhD
Maritime Industry Energy Efficiency Adviser
Capacity Building Activities & Gender Mainstreaming

Applying a gender lens to key climate change and development priorities/sector

The toolkit is designed to support climate change practitioners in the national governments, non-governmental organizations, regional and international organizations, integrate gender into all aspects of policy, programming and project work.

Module 1
- is the introductory module explains why gender is a critical consideration in climate change programmes, projects and strategies, and clarifies some common misconceptions;

Module 2
- focuses on the links between gender and climate change in specific sectors (e.g. food security, water and energy); and uses sector relevant case studies to explain how to take gender into consideration; and,

Module 3
- is the ‘how-to’ section and will take you through the different phases of a typical climate change programme/project cycle, identifying potential entry-points for integrating gender in each phase and also includes a generic gender checklist that may be applied to programmes and projects.
Pilot projects on EE

**SEEMP Template**
Developed and distributed during regional and 7 national workshop

**SEEMP Implementation**
Drafted SEEMP for vessel by country
A – 7
B – 5
C – 6
D – 1
E – 0
F – 12
G – 4

**SEEMP Assessment**
To be conducted together with the Pacific Islands Domestic Ship Safety Programme (Safe Operational Plan)

**Case study**
Review completed for the type of vessel and applicable energy efficient technologies

**Pilot Project**
Marine Landing Craft that is 45.05 meter long and has a capacity to carry 25 passenger and 200 metric tonnes of cargo

The Global MTCC Network (GMN) project is funded by the European Union and is implemented by the IMO
<table>
<thead>
<tr>
<th>Country</th>
<th>SEEMP</th>
<th>Ship Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>7</td>
<td>Cargo &amp; Passenger Vessel, Special Purpose Vessel, Fishing Vessel, Tourist Vessel</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>Cargo Vessel, Cargo &amp; Passenger Vessel</td>
</tr>
<tr>
<td>C</td>
<td>6</td>
<td>Cargo Vessel, Cargo &amp; Passenger Vessel, Special purpose vessel</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>Cargo &amp; Passenger Vessel</td>
</tr>
<tr>
<td>E</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>F</td>
<td>12</td>
<td>Cargo Vessel, Cargo &amp; Passenger Vessel, Special purpose vessel</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>Cargo &amp; Passenger Vessel</td>
</tr>
</tbody>
</table>

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Case study – Vessel Age

Review of the age of the fleet from 7 target countries

- Before 1990 (> 28 years) 43.1%
- Between 2000 - 1990 (18 - 28 years) 15.9%
- After 2000 (18 years) 41%
- After 2012 (< 6 years) EEDI applicable to 13.3%
- Between 2000 - 1990 (18 - 28 years) 15.9%
- Before 1990 (> 28 years) 43.1%

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Retrofitting

Marine Landing Craft of 45.05 meter long and has a capacity to carry 25 passenger and 200 metric tonnes of cargo.

The energy storage modules could be re-charged via the solar panels, by the ships main generators or from shore power when available.

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## Port Energy Management

<table>
<thead>
<tr>
<th>Country</th>
<th>Port Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>Suva</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>Majuro</td>
</tr>
<tr>
<td>Samoa</td>
<td>Apia</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>Funafuti</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>Honiara</td>
</tr>
<tr>
<td></td>
<td>Noro</td>
</tr>
<tr>
<td></td>
<td>Honiara &amp; Noro (level 2)</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>Port Vila</td>
</tr>
<tr>
<td></td>
<td>Luganville</td>
</tr>
<tr>
<td>Kiribati</td>
<td>Betio</td>
</tr>
<tr>
<td>Tonga</td>
<td>Nuku'alofa</td>
</tr>
</tbody>
</table>

- Port of Suva have reduced electricity consumption by **21%** at their building compared with 2016, lighting was upgraded to **LED**, expecting an annual **reduction of 75,000 kWh, $31,000 and 32 tonnes of GHG emissions**. In addition, a **$70,000 installation power board** (for power factor correction) has **saved $26,000 for September** which is expected to provide a total of **$300,000 savings annually** out of the $2.1 million cost in energy at Suva port.

- Port of Honiara, after implementation of a “Switch the light” new policy at the main berth, the Solomon Islands Port Authority **saved SB$40,358.20 around 7,800 kWh and 6.7 tonnes of GHG in 2 months** in 2017. After one year implementation of various measures including upgrading all port lighting by LED, the **overall energy use will be down by 8%**, saving **15 tonnes of greenhouse gas a month** on average. Over 8 months, 126 tonnes of GHG were saved, which will accumulated to **10% reduction of GHG emissions per year**.
Challenges and future Plans

Challenges

- Vessels drawings and documentations unavailable with vessel owner (EEDI)
- No Maintenance Plan
- Safe Operational Plan not implemented
- Energy efficiency not practiced on board
- Lack of awareness created by the ship operator on safety & efficiency

Future Plans

- Retrieve information from ship builder
- Train and create awareness on ship energy efficiency
- Provide further assistance in implementing SEEMP
- Promote cost benefits of ship energy efficient operations and technologies
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THANK YOU