Aim of the sustainability committee
This committee aims at studying environmental, economic, social topics for the maritime and port sector and finding solutions to reduce the carbon footprint, improving relationships with cities and people’s mobility.
Environmental topics identified by the Sustainability Committee
Environmental topics identified by SC

1. Air quality
2. Biodiversity protection
3. Carbon footprint calculation (Port activities impact on climate change)
4. Mobility
5. Alternative fuels / Renewable energy
6. Noise
7. Dredging and diffused pollution around port areas
8. MARPOL and waste generated in ports
9. Coastal erosion
10. Port-city relationship
Committee’s Roadmap

1. Define a common methodology to measure the carbon footprint

2. To exchange experiences and knowledge between MEDPorts and ports from other regions (out of the Med)

3. Put the focus on the Onshore Power Supply and try to get solutions for the implementation according to the different needs
Priority actions
Priority actions

1. To gather the port sustainability reports of port members.
2. To define a common methodology to measure the carbon footprint.
3. To exchange experiences and knowledge between MEDPorts and ports from other regions (out of the Med).
4. To produce common rules, applicable to shipowners, aimed at reducing noise and emissions.
5. To focus on the on-shore supply.
Sustainable Committee actions 2018-2019
It was agreed that a questionnaire containing all the previously mentioned topics should be issued and distributed among ALL MEDPorts members in order to have a clear scope on the Action Plan to be executed by the Committee.
Questionnaire results
Questionnaire results. Introduction.

• 22 questions were addressed to all Medports Members in order to set the priorities for further research.

• The questionnaire contained several questions related to:
  • OPS
  • Air quality / Noise
  • Carbon footprint calculation
  • Energy alternative sources
  • Energy and environmental management systems
  • Waste management
Questionnaire results.

- Waste management / MARPOL and air emissions / noise were chosen as the most challenging topics for further development and research.
Questionnaire results. Comparison with ESPO top 10 Environmental priorities (ESPO Report 2018).

<table>
<thead>
<tr>
<th>Waste management / MARPOL</th>
<th>1st</th>
<th>10th &amp; 5th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air emissions / Noise</td>
<td>2nd</td>
<td>1st &amp; 3rd</td>
</tr>
<tr>
<td>Energy / OPS</td>
<td>3rd</td>
<td>2nd</td>
</tr>
<tr>
<td>Water quality / Ballast</td>
<td>4th</td>
<td>8th</td>
</tr>
<tr>
<td>Contingent plans</td>
<td>5th</td>
<td>n/e</td>
</tr>
<tr>
<td>Carbon footprint / Climate change</td>
<td>6th</td>
<td>7th</td>
</tr>
</tbody>
</table>
Questionnaire results. WASTE MANAGEMENT / MARPOL
Questionnaire results. WASTE MANAGEMENT / MARPOL

- Best practices reported
  - Elaboration of waste management plans for ports
  - Green charging program for good performance
  - Elaboration of waste recovery plans for port implementation
  - Provide waste facilities for segregation and further management in port
  - Provide MARPOL reception facilities in port
Questionnaire results. NOISE / AIR EMISSIONS
• Best practices reported
  • Speed limits for ships approaching the port
  • Shutdown ship’s engines during night period
  • OPS implementation
  • Enhance the use of train as a mean of transport from the quay
  • Better maintenance of port machinery
  • Real-time monitoring of noise and air quality
  • Dust-free fences around the solid bulk handling areas
  • Settlement of action plans for reducing air pollution
Questionnaire results. ENERGY / OPS
Questionnaire results. ENERGY / OPS

• Best practices reported
  • Provide OPS infrastructure by using LNG generators
  • Optimize energy consumption from port machinery
  • Continuous upgrading of the port machinery
  • Implementation of Renewable energy
  • Implementation of energy management plans
  • Reuse rainwater for energy production
Questionnaire results. ENERGY / OPS

- Only 33% (4 out of 12) of the answers declared to have LNG supply available at the port. Only 1 port has the possibility to supply LNG by barge.

![Graph showing LNG bunkering operation types]

**TYPES OF LNG BUNKERING OPERATION**

- **PTS**: Pipe to ship
- **STS**: Ship to ship
- **TTS**: Truck to ship

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**Legend:**
- **0%**: None
- **5%**: None
- **10%**: None
- **15%**: None
- **20%**: None
- **25%**: None
- **30%**: None
- **35%**: None
• A bit less than 50% of the participants declared that their ports are fitted with OPS facilities. (Not all for commercial ships)

• The balance are still under assessment studies for its implementation
Questionnaire results. ENERGY / OPS

- Most OPS facilities are meant to be for Container, Cruise and Ro-ro vessels. Also other candidates are Ro-pax vessels.

- However, Cruises are not yet connected to the grid in any port.
Questionnaire results. ENERGY / OPS

- Main constrains for non implementing OPS in MEDPorts:

<table>
<thead>
<tr>
<th>OPS IMPLEMENTATION CONSTRAINS</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of Demand from Shippers</td>
<td>8</td>
</tr>
<tr>
<td>Lack of Specific Regulations</td>
<td>3</td>
</tr>
<tr>
<td>Power Shortage</td>
<td>8</td>
</tr>
<tr>
<td>Lack of Space on Deck for Implementation</td>
<td>1</td>
</tr>
<tr>
<td>Infrastructure Costs for Ships</td>
<td>8</td>
</tr>
<tr>
<td>Energy Costs for Ships</td>
<td>8</td>
</tr>
<tr>
<td>Infrastructure Costs for Operations</td>
<td>8</td>
</tr>
</tbody>
</table>
Questionnaire results. Carbon footprint

- More than 50% of the participants have declared that they have already calculated their Carbon Footprint to some extent.
Conclusions and next steps
Conclusions

• The 3 top topics chosen by the MEDPOorts members are:
  1. Waste management
  2. Air emissions / noise
  3. Energy / OPS

• These topics are in line with the SC Roadmap and the ESPO hierarchy of priorities.

• Further work must be done on the above mentioned topics starting next SC meeting.
Next steps

- Detailed research on **waste management**, including circular economy, among the MEDPorts and compilation of best practices.

- Detailed research on best practices for **air quality** improvement (monitoring, forecast, action plans…) for port cities.

- Detailed research on **energy transition** among the MEDPorts and transferability of best practices identified. OPS is still not implemented at ports for several reasons, many of them local.
Questions & Answers
THANK YOU
For your attention

Sustainability Committee
Raúl Cascajo, President