Clean Marine Fuels working group

Driven to advance the transition towards clean marine fuels for decarbonisation and air quality improvement.
Content

About the CMF working group
The challenge and the tools we provide
Planning the near future
Who we are, what we do

Empowering ports to facilitate, stimulate and regulate the supply of new clean marine fuels by providing expertise and guidance on safe and efficient bunker operations.
Our goal

By 2030 the safe and efficient supply of new clean marine fuels in ports is to be common practice
The challenge

Ports have challenges in enabling the facilitation of new marine fuels
CMF Support

Practical audit and guidance tools for new, clean marine fuels

An open, data-sharing information platform

Cooperation with other initiatives in the maritime industry
CMF Port Safety Management Framework

Harmonize system and operational safety for the ship - bunker facility interface

Allocate safe bunker locations

Prepare terminals
CMF PSM Framework

Port Regulatory Framework
- Licensing of Bunker Facility Operators (BFOs)
- Arranging terminal preparedness

Supporting Instruments
- IAPH’s Audit Tool for BFOs
- IAPH’s Energy Carrier Ready Terminal
- Risk Analysis based on local or national legislation

System Safety

Spatial Allocation
- Assignment of bunker locations

Operational Safety
- Compulsory use of bunker checklists
- Terminal safety arrangements

IAPH’s Energy Carrier Bunker Checklists
IAPH’s Terminal Information Sheet

Port Safety Management on bunker operations for low flash point marine energy carriers
CMF PSM Framework

IAT-LNG audit checklist

LNG Ready Terminal
Port and Terminal guidance

IAPH's Audit Tool for BFOs
IAPH's Energy Carrier Ready Terminal

Supporting Instruments

Port Regulatory Framework

Spatial Allocation

System Safety

Port Safety Management on bunker operations for low flash point marine energy carriers
CMF PSM Framework

Port Safety Management on bunker operations for low flash point marine energy carriers
Spatial allocation

External Safety: Risks to the surrounding area when handling fuels (the use, storage, and transport of those fuels)
**Available tools**

### SYSTEM SAFETY

<table>
<thead>
<tr>
<th>Tool</th>
<th>Energy Carrier</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNG BFO Audit Tool</td>
<td>LNG</td>
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<tr>
<td>LNG Ready Terminal Tool</td>
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### OPERATIONAL SAFETY

<table>
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<tr>
<th>Tool</th>
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<tbody>
<tr>
<td>LNG checklist Truck to Ship</td>
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<tr>
<td>LNG checklist Ship to Ship</td>
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<tr>
<td>LNG checklist Ship to Ship Terminal Information Sheet</td>
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<tr>
<td>LNG checklist Bunker Station to Ship</td>
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In progress and planned

<table>
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<tr>
<th>Tool</th>
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<th>Status</th>
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<tbody>
<tr>
<td>Research on conversion of LNG BFO Audit Tool to a generic BFO Audit Tool for existing and new fuels</td>
<td>All</td>
<td>Started</td>
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<tr>
<td>Port Guidance Tool (Gap Analyses Tool)</td>
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<tr>
<td>Research on conversion of LNG Ready Terminal Tool to a generic Fuel Ready Terminal Tool for existing and new fuels</td>
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# In progress and planned

## Operational Safety

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<tr>
<td>Multiple Truck to Ship Cryogen checklist based on ISGOTT 6 format</td>
<td>LNG, LH2</td>
<td>Final draft</td>
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<tr>
<td>Multiple Truck to Ship Flammable and/or toxic liquid checklist based on ISGOTT 6 format</td>
<td>Methanol, other fuels with flashpoint &lt; 55°C</td>
<td>First draft</td>
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<tr>
<td>Shore to Ship containerized energy carriers</td>
<td>Battery packs, Hydrogen racks</td>
<td>2021</td>
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<tr>
<td>Ship to Ship Cryogen checklist based on ISGOTT 6 format</td>
<td>LNG, LH2</td>
<td>Not started</td>
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<tr>
<td>Ship to Ship Flammable and/or toxic liquid checklist based on ISGOTT 6 format</td>
<td>Methanol, Other fuels with flashpoint &lt; 55°C</td>
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<td>Ship to Ship Ammonia checklist based on ISGOTT 6 format</td>
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Conclusion, references

Facilitating safe and efficient bunker operations for new marine fuels in ports is challenging

CMF provides tools to face the challenge

Cooperation within the maritime industry is essential

https://sustainableworldports.org/clean-marine-fuels

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