IMO - IAPH collaboration to support developing countries in addressing port emissions

PPCAC Conference, Planning for air emission reductions, March 2018
Astrid Dispert, GloMEEP Technical Adviser, IMO
Objectives of the Global Maritime Energy Efficiency Partnerships (GloMEEP) Project

IMO - IAPH collaboration to support developing countries in addressing port emissions

Global Industry Alliance to Support Low Carbon Shipping

Future direction of GloMEEP – next steps?
Chapter 4 of MARPOL Annex VI – energy efficiency framework

Design & Construction

Energy Efficiency Design Index
Performance of the hardware (ship)

$$EEDI = \frac{FOC \times C}{\text{Capacity} \times V_s}$$

Operation

Speed control, weather routing, well maintenance, optimum trim and draft etc.

Energy Efficiency Operational Indicator
Performance improvement by the effort in operation

$$EEOI = \frac{\text{Fuel (ave.)} \times C}{\text{Cargo} \times \text{Distance}}$$

SEEMP
Ship Energy Efficiency Management Plan

Global maritime energy efficiency partnerships
Combined estimated impact of EEDI and SEEMP by 2050:
Reduction of ~1 billion tonne CO₂ / year.
Global Maritime Energy Efficiency Partnerships (GloMEEP) Project

10 Lead Pilot Countries: 
Argentina, China, Georgia, India, Jamaica, Malaysia, Morocco, Panama, Philippines and South Africa

- Approx. US $ 3 million cash (GEF + GIA + IMO TC + bilateral donors)
- 3 year pilot project (terminates Dec. 2018)
Global Maritime Energy Efficiency Partnerships (GloMEEP) Project

Overall objective:
Build capacity in developing countries for implementing the technical and operational measures for energy efficient shipping and catalyze overall reductions in GHG emissions from international shipping.

Three main project components:

1. Legal, Policy and Institutional Reforms (LPIR)
2. Capacity-building and knowledge sharing
3. Public-private partnerships
Legal, Policy and Institutional Reforms (LPIR)

Capacity-building and knowledge sharing

Public-private partnerships
**Aim:** Support countries in undertaking national Legal, Policy and Institutional Reforms (LPIR) activities for effective implementation of MARPOL Annex VI

<table>
<thead>
<tr>
<th>GloMEEP country</th>
<th>Ratified MARPOL Annex VI (Entry into force)</th>
<th>National Legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>In progress</td>
<td>In progress</td>
</tr>
<tr>
<td>China</td>
<td>Yes (23/08/2006)</td>
<td>In place</td>
</tr>
<tr>
<td>Georgia</td>
<td>In progress</td>
<td>In progress</td>
</tr>
<tr>
<td>India</td>
<td>Yes (23/11/2011)</td>
<td>In place</td>
</tr>
<tr>
<td>Jamaica</td>
<td>Yes (29/08/2008)</td>
<td>In progress</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Yes (27/12/2010)</td>
<td>In progress</td>
</tr>
<tr>
<td>Morocco</td>
<td>Yes (03/08/2011)</td>
<td>In progress</td>
</tr>
<tr>
<td>Panama</td>
<td>Yes (19/05/2005)</td>
<td>In place</td>
</tr>
<tr>
<td>Philippines</td>
<td>In progress</td>
<td>In progress</td>
</tr>
<tr>
<td>South Africa</td>
<td>Yes (17/12/2015)</td>
<td>In progress</td>
</tr>
</tbody>
</table>
1. Legal, Policy and Institutional Reforms (LPIR)

In collaboration with IMarEST, GloMEEP is developing three guides:

- **Rapid Assessment Guide for determining the country maritime energy efficiency and emissions status**
  GloMEEP Monograph Series No.1

- **Guide for maritime energy efficiency strategy development**
  GloMEEP Monograph Series No.2

- **Guide for incorporation of MARPOL Annex VI into national law**
  GloMEEP Monograph Series No.3
1. Legal, Policy and Institutional Reforms (LPI R)

Port emissions sub-component: Strategic partnership agreement between IAPH and IMO (under the framework of GloMEEP)

Aim of the partnership is to support developing countries in:

• Gaining a better understanding of emissions in their ports
• Developing strategies to address emissions
Development of two new port-related guide documents:


Work in progress!
Guide for the Development of Port Emissions Assessments

• Updates previous works
• Covers critical inventory planning elements
  - Drivers
  - Source categories
  - Geographical & operational domains
  - Air quality pollutants & GHGs
  - Level of detail
  - Data streams
• Port-related sources
• Regulatory frameworks
• Types of assessments
• Methods & approaches
• Assessing tools & use
• Putting results in perspective
• Comparing year over year
Guide for the Development of a Port Emissions Reduction Strategy

- Updates previous works
- Covers critical strategy planning elements
  - Drivers
  - Challenges & opportunities for viable strategies
  - Pollutant/GHG hierarchy
  - Strategy analysis & evaluation considerations
  - Implementation options & considerations
  - Administration considerations
  - Tracking progress & reporting considerations
- Methods & approaches
- Scenario analysis
- One-off strategy vs. programmatic approaches
- Determining cost effectiveness
- Strategy ranking & selection considerations
- Examples
Three GloMEEP countries (Jamaica, Malaysia and South Africa) to undertake a port emissions assessment and develop a reduction strategy for one of their major ports.

- Development of Guides
- Training of national consultants in the use of Guides
- Consultants develop national reports
- Adoption of national reports
Legal, Policy and Institutional Reforms (LPIR)

Capacity-building and knowledge sharing

Public-private partnerships
2. Capacity building and knowledge sharing

**Aim**: Enhance awareness and capacity to ratify, implement and enforce relevant regulations as well as catalyse uptake of ship and port emission reduction measures in the GloMEEP countries.

- Develop capacity-building training packages
- Train new generation of maritime energy efficiency experts
- Create global knowledge sharing forums
- Share all tools and materials with relevant stakeholders
2. Capacity building and knowledge sharing

• Development of three new workshop packages:
  • Model Course 4.05 on Energy Efficiency Ship Operation
  • Port State Control and Enforcement of MARPOL Annex VI
  • Prevention and control of shipping and port air emissions

• Translation into Spanish and French

• 20 workshops implemented on global, regional and national level (500+ participants trained)

• Sharing of tools and material developed with all relevant stakeholders
2. Capacity building and knowledge sharing

• Development of new 3 day workshop package on the “Prevention and Control of Shipping and Port Air Emissions”

• Training sessions will be delivered in all 10 GloMEEP countries (April-June 2018)

• Experts from the Port of Los Angeles, Port of Long Beach and Starcrest Consulting Group supporting IMO in the delivery of trainings
Legal, Policy and Institutional Reforms (LPIR)

Capacity-building and knowledge sharing

Public-private partnerships
June 2017: Launch of “Global Industry Alliance to Support Low Carbon Shipping”
Initially established for 2 years period
Aim: identify and develop innovative solutions to address common barriers to the uptake and implementation of energy efficiency technologies and operational measures
Focus on a number of priority areas including:

- Energy efficiency technologies and operational best practices
- Alternative fuels and energy carriers
- Digitalization
- Human Element
- Ports

Global Industry Alliance to Support Low Carbon Shipping
Global Industry Alliance to Support Low Carbon Shipping – GIA membership

- Currently 16 GIA members from shipping and ports sector

- Contribute technical expertise / data (GIA Task Force) as well as financial capital through a yearly membership fee (GIA Fund)
Activities currently funded through the GIA Fund:

• E-Learning course on the energy efficient operation of ships
• Study on Just-In-Time arrival and services
• Guide to alternative fuels
• Protocol for validation of performance of energy efficiency technologies
• Ideas generation workshops
GloMEEP – Future direction?

- GloMEEP Phase 1: terminates December 2018
- Continuous interest from IMO Member States in becoming GloMEEP countries (including from LDCs and SIDS)
- MARPOL Annex VI keeps continuously evolving!
- GIA – potential to significantly scale-up industry participation
- Continue supporting developing country ports in addressing emissions
Thank you for your attention!

GloMEEP webpage: http://glomeep.imo.org

Minglee Hoe  
GloMEEP Project Assistant

Astrid Dispert  
GloMEEP Technical Adviser

Project Coordination Unit  
Contact details:

adispert@imo.org
mhoe@imo.org