BSR’s Mission and Strategy

Our mission: We work with business to create a just and sustainable world.

Our strategy: We develop sustainable business strategies and solutions through consulting, research, and cross-sector collaboration with our global network of approximately 300 member companies.

- Alcatel-Lucent
- A.P Moller-Maersk Group
- Aramex
- AREVA Group
- Best Buy
- Bloomberg L.P.
- Boeing
- Cisco Systems
- Coca-Cola
- DONG Energy
- Duke Energy
- Electrolux
- Ford Motor Company
- GE
- Hitachi
- Hyatt Hotels
- IBM
- IKEA
- Kraft Foods
- Levis Strauss
- McDonald’s
- Microsoft
- Nike
- Novo Nordisk A/S
- OIA Global
- Panasonic
- Pfizer
- Rio Tinto
- Royal Dutch Shell
- SAP
- Sodexo Group
- Toshiba
- Unilever
- United Airlines
- UPS
- Yahoo!
- Walmart Stores
Clean Cargo Working Group’s Focus and Members

Clean Cargo (CCWG)

- A global B2B initiative made up of leading cargo carriers and their customers (33 companies), dedicated to environmental performance improvement in marine container transport through measurement, evaluation, and reporting.

Goals:

1. Enabling ocean freight carriers to track and benchmark their performance and easily report to customers in a standard format;
2. Enabling cargo owners (shippers) review and compare carriers’ environmental performance when reporting and making informed buying decisions;
3. Driving collaborative effort to raise the bar on environmental performance of the maritime industry.
Shippers are Setting Public Goals to Reduce Transport and Total Footprint Emissions…

Electrolux

Aims to reduce transport carbon emissions 15% from 2010 levels by 2014

<table>
<thead>
<tr>
<th>TARGET</th>
<th>PERFORMANCE</th>
<th>PROGRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliver 30-percent absolute reduction in CO₂ emissions from 2003 by FY20. (2003 baseline is 311,859 tonnes)</td>
<td>FY09 produced a 14-percent increase in CO₂ emissions from the FY03 baseline. Efforts to reduce this impact can be appreciated when the CO₂ percent change is compared to the overall growth in business during this timeframe. Nike brand revenue increased approximately 70 percent from FY03 to FY09.</td>
<td>On track</td>
</tr>
</tbody>
</table>
...But They are Challenged to Measure Total Logistics Footprint

- In order to understand where reductions within the logistics network can be made, it is necessary to understand the impacts across the value chain.

- Essential factors for measurement include:
  - standardized widely accepted methodologies
  - comparable basis of reporting across modes
  - good input data
  - effective output information

- The work of Clean Cargo is shaped by continually addressing these factors within the maritime segment and across the intermodal chain.
Clean Cargo Enables Companies to Address the Challenge
A Standardized Annual Data Collection Process…

1. **Clean Cargo Carrier Environmental Performance Metrics (EPM):**
   - Standardized set of metrics for assessing ocean carriers’ environmental performance – vessel by vessel incl. CO2 using an industry std. methodology
   - **Verification** of carrier information
   - Shippers receive individual ‘Carrier Scorecards’

2. **Carrier Environmental Performance Survey (EPS):**
   - Gathers qualitative information on carriers’ environmental management and performance annually
   - Regular review of alignment with standard shipper questionnaires
   - Shippers receive carrier specific EPS

**A Verified Process:**
- Verification protocol drafted in 2010 with Lloyds Register and others, in collaboration with all members to define scope and depth

**Assessing Key Areas of Performance:**
- CO₂, SOx and NOx
- Waste management, water effluents, chemical use
- EMS, transparency
CCWG gathered CO2, SOX, NOx emissions data from 10+ carriers for 7 years – reflecting one of the largest environmental data sets in the shipping industry.

Aggregated environmental performance data is released to membership annually, highlighting industry-wide performance:

- Carriers represent over 60% of global ocean container capacity.
- Clean Cargo gathers environmental data for over 2,000 container vessels.
- Data can be used to benchmark individual carriers against industry performance.
...Individual Carrier KPIs and Scoring...

- Performance scores and KPIs at a carrier level:

<table>
<thead>
<tr>
<th>Carrier Name:</th>
<th>ABC Line</th>
<th>Bureau Veritas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrier Data Verified?</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 1 - PERFORMANCE SCORE**

<table>
<thead>
<tr>
<th>Category</th>
<th>% of Fleet Reported On</th>
<th>Max Score Possible</th>
<th>Carrier Score</th>
<th>Score as % of Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owned</td>
<td>100%</td>
<td>40</td>
<td>29.5</td>
<td>74%</td>
</tr>
<tr>
<td>chartered</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO2 Emissions (across all trade lanes)</td>
<td>100%</td>
<td></td>
<td>15.0</td>
<td>75%</td>
</tr>
<tr>
<td>SOx Emissions</td>
<td>100%</td>
<td></td>
<td>2.2</td>
<td>5%</td>
</tr>
<tr>
<td>NOx Emissions (based on reporting vessels built/converted after 1999)</td>
<td>78%</td>
<td></td>
<td>5.5</td>
<td>65%</td>
</tr>
<tr>
<td>Environmental management systems</td>
<td>2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste, Water &amp; Chemicals</td>
<td>2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transparency</td>
<td>Not applicable*</td>
<td>Not applicable*</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>Overall Performance</td>
<td>100%</td>
<td>70.2</td>
<td>70%</td>
<td></td>
</tr>
</tbody>
</table>

*Not applicable because Transparency is assessed at a corporate-level, not a fleet-level.

- Carbon (and in 2013 SOx) emissions factors at a trade lane level, year-over-year:

**TABLE 4 - Year-over-Year CO2 PERFORMANCE**

<table>
<thead>
<tr>
<th>CO2 Emissions - by trade Lane</th>
<th>grams CO2/TEU-km</th>
<th>Prior Year</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia--Africa</td>
<td>96.9</td>
<td>84.88</td>
<td>12%</td>
</tr>
<tr>
<td>Asia--South America (EC/WC)</td>
<td>91.4</td>
<td>95.50</td>
<td>-4%</td>
</tr>
<tr>
<td>Asia--Oceania</td>
<td>105.5</td>
<td>91.10</td>
<td>14%</td>
</tr>
<tr>
<td>Asia--North Europe</td>
<td>57.6</td>
<td>67.25</td>
<td>-17%</td>
</tr>
<tr>
<td>Asia--Mediterranean</td>
<td>64.8</td>
<td>67.53</td>
<td>-4%</td>
</tr>
<tr>
<td>Asia--North America EC</td>
<td>77.6</td>
<td>78.11</td>
<td>-1%</td>
</tr>
<tr>
<td>Asia--North America WC</td>
<td>60.6</td>
<td>68.80</td>
<td>-14%</td>
</tr>
<tr>
<td>Asia--Middle East/India</td>
<td>71.1</td>
<td>73.73</td>
<td>-4%</td>
</tr>
<tr>
<td>North Europe--North America EC (incl. Gulf)</td>
<td>109.8</td>
<td>65.42</td>
<td>22%</td>
</tr>
<tr>
<td>North Europe--North America WC</td>
<td>-</td>
<td>79.81</td>
<td>0%</td>
</tr>
<tr>
<td>Mediterranean--North America EC (incl. Gulf)</td>
<td>67.1</td>
<td>80.04</td>
<td>-19%</td>
</tr>
<tr>
<td>Mediterranean--North America WC</td>
<td>49.4</td>
<td>59.70</td>
<td>-29%</td>
</tr>
<tr>
<td>Europe (North &amp; Med)--Middle East/India</td>
<td>77.4</td>
<td>76.19</td>
<td>2%</td>
</tr>
</tbody>
</table>
...And Additional Analysis to Support Improvement

![Graph showing vessel size and CO2 performance](image)

Source: All vessels reported to CCWG, 2010 data
Clean Cargo Advances Transparency and Availability of Information for the Industry

Clean Cargo has released reports for the past 3 years on industry-leading aggregate emissions factors by trade lane, in the interest of public disclosure and to share credible industry wide data for stakeholders to use and analyze:

**Beyond the Factory Gates**

[Link to Beyond the Factory Gates report]

**2012 Trade Lane Emissions Brief**

[Link to 2012 Trade Lane Emissions Brief]

**CO2 emissions rates among Clean Cargo carriers showed an average**

- **6.1% decrease** from 2010 to 2011
- **7.1% decrease** from 2009 to 2010
Clean Cargo Collaborates to Enable Better Industry Standardization and Alignment

- CCWG CO2 methodology is the ocean container segment standard – influencing entire maritime segment & other modes

**CCWG tools and methods are informed by:**
- WRI GHG Protocol
- Global Reporting Initiative (GRI)
- World Economic Forum (WEF)
- International Maritime Organization (IMO)
- World Shipping Council (WSC)
- U.S. EPA SmartWay
- Clean Shipping Project
- WPCI Environmental Ship Index (ESI)

**CCWG discusses alignment of intermodal tools with:**
- World Economic Forum (WEF)
- EcoTransIT, NTM
- Software providers
- U.S. EPA SmartWay
- Green Freight Europe
- COFRET

**CCWG is advisory panel to:**
- COFRET
- European Commission
- ICCT World Shipping Efficiency project
Thank You!

Marshall Chase, Manager
mchase@bsr.org

Visit the Clean Cargo website:
www.bsr.org/cleancargo