Clean Cargo Working Group (CCWG)

Container Shipping Methodology

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Current CCWG Membership

Cargo Carriers

Shippers and Freight Forwarders
Clean Cargo Working Group – A Global B2B Platform

- Established in 2003
- Dedicated to improving environmental performance of ocean container transport
- Creating practical tools for measuring, evaluating and reporting environmental impacts of global transportation
- CO₂ methodology developed by the Group broadly recognized as industry standard for container shipping
- Emission factors generated enable shipping customers to calculate their carbon footprint
Annual Aggregated Industry Performance Data

- CCWG gathered CO₂ and SOx emissions data from carriers for several years
- Aggregated environmental performance data is released to membership annually, highlighting industry-wide performance.
- Data can be used for procurement and reporting purposes.

CCWG Collaborative Progress Report available at
CCWG Annual Data Collection Process – not just CO₂.....

- Fuel Quality (sulfur content)
- NOx performance
- Emission reduction goals
- Technical / operational measures
- EMS
- Waste
- Ballast Water
- Training / Awareness
- Initiatives / Projects / Partnerships
- Procurement Policies
CCWG Carbon Emission Calculation – Dry and Reefer shipments

Calculations are based on operational data

- total annual fuel consumption
- total annual distance sailed
- nominal capacity / no. of reefer plugs
- own / charter vessels
- Trade lane on which vessel is employed

= Trade lane emission factor (g CO$_2$/TEU-km)

Carrier specific trade lane emissions factors

Aggregated CCWG trade lane emission factors
## Carrier Trade Lane Emission Factors – Third Party Verification

### Example: Carrier Trade Lane Emissions

<table>
<thead>
<tr>
<th>Trade Lane</th>
<th>CO2 Emissions - Dry (g/TEU-km)</th>
<th>CO2 Emissions - Reefer (g/TEU-km)</th>
<th>Sulfur Emissions (g/TEU-km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia - Africa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia - Mediterranean</td>
<td>59.47</td>
<td>84.42</td>
<td>0.99</td>
</tr>
<tr>
<td>Asia - Middle East/India</td>
<td>62.00</td>
<td>83.67</td>
<td>1.09</td>
</tr>
<tr>
<td>Asia - North America EC</td>
<td>60.57</td>
<td>91.92</td>
<td>0.73</td>
</tr>
<tr>
<td>Asia - North America WC</td>
<td>58.92</td>
<td>89.33</td>
<td>0.83</td>
</tr>
<tr>
<td>Asia - North Europe</td>
<td>41.62</td>
<td>73.41</td>
<td>0.62</td>
</tr>
<tr>
<td>Asia - Oceania</td>
<td>66.43</td>
<td>97.83</td>
<td>1.03</td>
</tr>
<tr>
<td>Asia - South America (EC/WC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe (North &amp; Med) - Africa</td>
<td>78.75</td>
<td>121.38</td>
<td>1.15</td>
</tr>
<tr>
<td>Europe (North &amp; Med) - Latin America/South America</td>
<td>71.78</td>
<td>102.94</td>
<td>1.14</td>
</tr>
<tr>
<td>Europe (North &amp; Med) - Middle East/India</td>
<td>59.88</td>
<td>91.85</td>
<td>0.89</td>
</tr>
<tr>
<td>Europe (North &amp; Med) - Oceania (via Suez / via Panama)</td>
<td>68.42</td>
<td>102.68</td>
<td>1.08</td>
</tr>
<tr>
<td>Intra - Americas (Caribbean)</td>
<td>84.31</td>
<td>125.48</td>
<td>0.98</td>
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<tr>
<td>Intra - Europe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mediterranean - North America EC (incl. Gulf)</td>
<td>69.38</td>
<td>96.10</td>
<td>1.09</td>
</tr>
<tr>
<td>Mediterranean - North America WC</td>
<td>71.65</td>
<td>101.58</td>
<td>0.74</td>
</tr>
<tr>
<td>North America - Africa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North America - Oceania</td>
<td>95.97</td>
<td>121.68</td>
<td>1.44</td>
</tr>
<tr>
<td>North America - South America (EC/WC)</td>
<td>62.48</td>
<td>97.33</td>
<td>0.35</td>
</tr>
<tr>
<td>North America EC - Middle East/India</td>
<td>68.37</td>
<td>92.08</td>
<td>0.79</td>
</tr>
<tr>
<td>North Europe - North America EC (incl. Gulf)</td>
<td>71.86</td>
<td>100.05</td>
<td>0.85</td>
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<tr>
<td>North Europe - North America WC</td>
<td>65.14</td>
<td>95.20</td>
<td>0.87</td>
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<tr>
<td>South America (EC/WC) - Africa</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fleet wide emissions</td>
<td>61.81</td>
<td>92.79</td>
<td>0.79</td>
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</tbody>
</table>
How to use Carbon Emission Factors?

**Shippers:**
- Carbon Accounting
- Reporting Purposes
- Product Carbon Footprint
- Benchmarking
- Procurement
- ....

**Carriers:**
- Meeting customers’ demands
- Reporting Purposes
- Stakeholder dialogue
- Internal Benchmarking
- Supporting decision-making processes
- Continuous Improvement
- ....
Carbon Accounting

Shippers who want to calculate its company carbon footprint may use CO₂ trade lane emission factors considering following criteria:

- Number of TEUs shipped on respective trade lanes
- Distance sailed
  - Distance adjustment factor (15%)
- Utilization factor
  - Average utilization factor (70%)
- Possibly adding well-to-wheel adjustment factor
- ....

CCWG Methodology Report available at
Product Carbon Footprint - Example
Emission Calculation - Transport Chain

Pre-Carriage

Main Leg - Ocean

On-Carriage

Credible data?
EcoCalc – Hapag-Lloyd’s Emission Calculator

EcoTransIT World Emission Calculator Tool - the basis for Hapag-Lloyd’s EcoCalc

- Calculation of full transport chain
- Includes NOx and PM emission
- Supporting UN location codes
- Only 3-5 information entries needed for a calculation
- Multilingual user interface
- Result downloadable as PDF
- Integration of Hapag-Lloyd’s CO₂ emission data
EcoTransIT World

EcoTransIT World makes emission calculation an easy-to-go exercise

- EcoTransIT allows complete integration of CCWG CO2 emission data in business solutions
- To calculate (port-port) emission just type in
  - Location code  or
  - Postal Code
Thank you for your attention!