



How Clean Cargo Shippers Use, Integrate, and Benefit from Ocean Transport Emissions Data

A Clean Cargo Working Group Report
March 2013

Accounting for Ocean Transport Emissions in the Supply Chain

Rising consumer and regulatory pressures and the release of supply chain emissions reporting standards, such as GHG Protocol Scope 3, are pushing companies to account for the environmental impact of their supply chains, including the transportation of goods. Companies are increasingly asking their transport suppliers across road, rail, air, and ocean freight for reliable emissions data to better gauge the overall environmental footprint of their products.

The ocean leg of a products' journey often represents the most significant percentage, sometimes up to 70 percent, of a given company's transportation portfolio.¹ Yet a web of factors weighs into calculating ocean transport emissions, including trade routes, calls at port, and especially vessel capacity, all of which complicate cargo carriers' efforts to provide a simple answer. Over the past decade, the Clean Cargo Working Group (CCWG) has been developing a standard methodology to enable carrier companies to calculate their fleet emissions and transparently share it with their customers using a standard and approved scorecard (see Annex).

In this short report, participating Clean Cargo shipping customers (hereafter: shippers) have elected to share with the public how Clean Cargo data has helped them to measure, benchmark, and report on their ocean transportation emissions.

“Electrolux started to calculate its carbon emission from transportation a couple of years ago, and found out that emissions are at least as high as energy use from Group-combined operations. This reinforced the importance of working to reduce the company's transportation footprint through initiatives like Clean Cargo.”

—Gorm Kjærbøll, Electrolux

CLEAN CARGO SHIPPER SURVEY

In the fall of 2012, BSR conducted desktop research, a survey, and a series of interviews with Clean Cargo shippers to find out to what degree they use Clean Cargo data, how they integrate Clean Cargo tools and data into their companies, why they joined CCWG, and what value they receive from the working group. BSR collected this feedback from shippers in order to increase the working group's business value for individual members and to develop best-practice sharing within the group.

“As a global shipper you have responsibilities. You must be [part of] the discussions. Clean Cargo is by far the leading initiative for ocean freight because it operates on a global level. It gives us a good view of our current position, helps us to create awareness within the company, and enables us to compare ocean freight with other modes.”

—Willem Jan Beerthuis, Heineken

¹ As found through Clean Cargo surveys in 2012.

USING CLEAN CARGO DATA

As part of its objectives, Clean Cargo works to collect emissions data annually from its carriers throughout their entire fleet. Shippers receive this data in a scorecard format that highlights average fleet emissions on a trade-lane basis. BSR was curious to know how shippers use this data, and they responded as follows:

- » **CO₂ emissions:** Clean Cargo shippers use the Clean Cargo scorecard mainly to report on their CO₂ emissions, but sulfur-oxide (SO_x) and nitrogen-oxide (NO_x) emissions are becoming increasingly important.
- » **Carbon footprint calculation:** 80 percent of all interviewed shippers joined Clean Cargo because their companies wanted to access the primary data of ocean carriers in order to identify their baseline emissions in ocean transportation, calculate their carbon footprint, and set emissions reduction targets with a more accurate methodology.
- » **Intermodal transport comparison:** Shippers highlighted that access to Clean Cargo data enables them to compare different modes of transportation and make informed decisions where it may be possible to shift certain flows to ones with lower emissions (e.g., from air freight to ships or from road to trains or inland water transport).

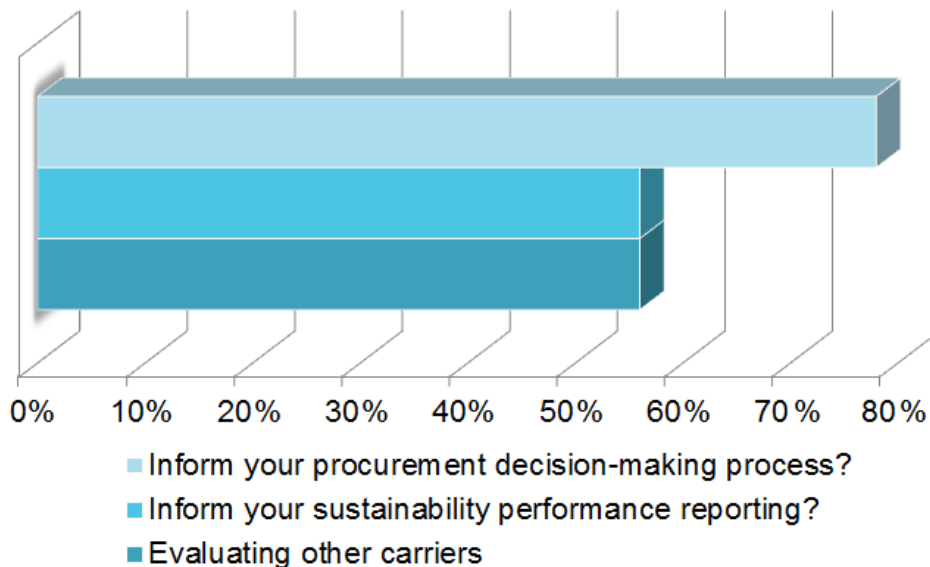
“Clean Cargo is steps ahead overall. It’s a really big benefit for Tchibo to calculate on real [i.e., primary] data. We appreciate the professional cooperation and are looking forward to the next steps in promoting sustainable shipping.”

—Fabian Flügge, Tchibo

INTEGRATING CLEAN CARGO DATA

Certain companies are of course farther along than others in integrating sustainability within their supply chains. BSR was eager to understand where Clean Cargo shippers stood on the question of integration, and asked what internal processes and procedures Clean Cargo data currently informs.

- » **Procurement decision-making:** 78 percent of responding shippers use the carrier scorecards to inform their procurement decision-making process.
- » **Sustainability reporting:** 56 percent of responding shippers use the carrier scorecards either in their sustainability performance reporting or for other uses, such as to calculate their own carbon footprint, as well as the supply chain carbon footprint of their customers.
- » **Evaluating other carriers:** Certain shippers use the carrier scorecards for carrier management, and they integrate the information into their ocean carrier key performance indicators.



BENEFITS OF CLEAN CARGO DATA

BSR was also interested to learn how Clean Cargo data compares to other industry-available emissions data. Shippers responded that both the quality and format of Clean Cargo data help them make business decisions as follows:

- » **Objective and measureable data:** Shippers appreciate Clean Cargo data because it is objective and measureable and because it provides data about ocean carriers year after year.
- » **Aggregate industry view:** The data enables shippers to have an aggregate view of the industry, as well as a deep understanding of each of their business partners.
- » **Improved decision-making:** The high-quality data also helps shippers make better and more informed decisions in their sustainability performance reporting and procurement process.

BENEFITS OF THE CLEAN CARGO WORKING GROUP

Ultimately, Clean Cargo positions itself as a platform for exchange. BSR asked to what degree Clean Cargo allows its shippers to exchange with their business partners and how it benefits their operations.

- » **Dialogue among carriers, shippers, and third-party logistics (3PL) providers:** Clean Cargo shippers benefit from an open dialogue with other shipper, carrier, and 3PL members. They learn from each other's experiences and see how other members tackle environmental and transport-related challenges. This dialogue also helps shippers to steer the direction for sustainable logistic supply chain management and set CO₂ reduction targets.

A 3PL member also mentioned that they benefit from an industry initiative like Clean Cargo because it allows them to collaborate directly with their carriers and their customers (shippers) and exposes them to upcoming environmental issues in the logistics industry as well.

- » **Level playing field:** Clean Cargo creates a level playing field for carriers, shippers, and 3PL providers. Within Clean Cargo, all group members can discuss their shared goals in reducing environmental impacts, use the same methodological process to measure the impacts, and report their data at the same time of the year. Clean Cargo provides its members with a standard process and methodology for reporting on their environmental performance.

“Industry initiatives like Clean Cargo are the most effective way to collaborate with both carriers and shippers. It enables us to work directly with the companies that operate the equipment, move the goods, and own the data. The ocean carriers understand the issues and the potential solutions better than anyone else.”

—Sarah Flagg, DAMCO

What's Next for Clean Cargo?

In addition to understanding how Clean Cargo shippers use the carrier scorecards and emissions data, BSR asked for ideas on where the group should focus in the future. Shippers responded that they would like to ensure that Clean Cargo is recognized as the global standard for measuring and reporting CO₂, NO_x, and SO_x in the ocean segment. Ultimately some would like to see Clean Cargo become a one-stop shop where they could obtain all emissions data for road, air, ocean, and rail freight. Shippers would also like to see better alignment and an industry reporting standard so that companies can more easily perform benchmarks.

In these respects, Clean Cargo continues to work with a number of industry initiatives to more closely align tools, data, and methodology across the shipping industry and the intermodal chain. The group firmly believes that continuing to share best practices will reveal additional opportunities for collaboration, and later this year BSR intends to release a toolkit that shippers can use to integrate ocean emissions data into their operations.

Annex: Clean Cargo Scorecard

Below is a sample of the carrier scorecard, which Clean Cargo shippers receive on an annual basis.

Clean Cargo Working Group Environmental Performance Assessment 2012 (Based on 2011 Data)

Scorecard

Per CCWG membership agreement, recipients agree to keep this information in confidence, and will not disclose, publish or otherwise distribute this Confidential Information to any third party.

Carrier Name: ABC Line
Carrier Data Verified? Yes Bureau Veritas

TABLE 1 - PERFORMANCE SCORE

	% of Fleet Reported On		Max Score Possible	Carrier Score	Score as % of Max
	Owned	Time-Chartered			
CO2 Emissions (across all trade lanes)	100%	100%	40	29.5	74%
SOx Emissions	100%	100%	20	15.0	75%
NOx Emissions (based on reporting vessels built/converted after 1999)	100%	78%	10	0.2	2%
Environmental management systems	97%	15%	10	10.0	100%
Waste, Water & Chemicals	97%	2%	10	5.5	55%
Transparency	Not applicable*	Not applicable*	10	10.0	100%
Overall Performance			100	70.2	70%

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

TABLE 2 - PERFORMANCE DETAILS

	Carrier Data	CCWG Baseline*
SOx Emissions		
Fleet-wide Average Sulfur Content of Fuel	2.3%	2.6%
NOx Emissions		
Post-1999 Fleet-wide Average Performance Against IMO curve	below IMO curve	6% below IMO curve
% of reported vessels included in NOx carrier score calculation*	74%	N/A
Environmental management systems		
% of Fleet with Certified EMS	100%	90%
Transparency		
Core Indicators Reported:	Indicator	Source
	Annual CO2 emissions from operations	Website
	Environmental goals/targets	Website
	Environmental policies	Website
	Energy efficiency/renewable initiatives	Website
	Fleet composition	Website
Additional Indicators Reported:	Charter partner impacts	
	Requirements for Charter Partners	Website
	Urban air emissions control	Website
	Impact of infrastructure assets	Website

*Under current regulation, only vessels built or having major engine conversion after 1999 have an imposed NOx cap and obligation to measure NOx emissions. Older vessels are not included in the NOx performance score.

TABLE 3 - CO2 PERFORMANCE DETAILS

CO2 Emissions - by trade Lane	% of Fleet Reported On		DRY CONTAINERS			REEFRERS		
	Owned	Time-Chartered	grams CO2/ TEU-km	CCWG Baseline*	Points	grams CO2/ TEU-km	CCWG Baseline*	Points
Asia--Africa	100%	100%	96.9	88.7	50.0	131.1	121.7	50.0
Asia--South America (EC/WC)	100%	100%	91.4	89.0	50.0	113.7	116.6	75.0
Asia--Oceania	100%	100%	105.5	89.9	50.0	134.4	117.8	50.0
Asia--North Europe	100%	100%	57.6	73.1	100.0	90.1	100.6	100.0
Asia--Mediterranean	100%	100%	64.8	76.3	100.0	103.6	106.6	75.0
Asia--North America EC	100%	100%	77.6	85.7	75.0	99.2	110.8	100.0
Asia--North America WC	100%	100%	60.6	84.0	100.0	92.2	110.4	100.0
Asia--Middle East/India	100%	100%	71.1	79.5	100.0	77.7	109.3	100.0
North Europe--North America EC (incl. Gulf)	100%	100%	109.8	82.4	50.0	139.2	112.5	50.0
North Europe--North America WC	--	--	-	89.5	--	-	119.2	--
Mediterranean--North America EC (incl. Gulf)	100%	--	67.1	83.6	100.0	101.5	112.3	75.0
Mediterranean--North America WC	100%	100%	46.4	69.5	100.0	74.1	101.6	100.0
Europe (North & Med)--Middle East/India	100%	100%	77.4	71.6	50.0	110.9	102.2	50.0
Europe (North & Med)--Africa	--	--	-	74.5	--	-	108.2	--
Europe (North & Med)--Oceania (via Suez / via Panama)	--	100%	101.9	98.7	50.0	127.0	200.4	100.0
Europe (North & Med)--Latin America/South America	--	100%	117.6	94.8	50.0	158.9	124.0	50.0
North America--Africa	--	--	-	129.6	--	-	180.2	--
North America EC--Middle East/India	100%	--	79.8	80.6	75.0	109.3	106.9	50.0
North America--South America (EC/WC)	100%	100%	108.3	87.7	50.0	174.1	117.8	50.0
North America--Oceania	100%	100%	89.7	103.1	100.0	121.5	136.7	100.0
South America (EC/WC)--Africa	--	--	-	80.9	--	-	111.1	--
Intra-Americas (Caribbean)	--	100%	102.9	85.0	50.0	135.3	113.3	50.0
Intra-Asia	100%	100%	69.5	76.3	75.0	91.3	107.1	100.0
Intra-Europe	100%	100%	130.7	74.1	50.0	175.3	105.1	50.0
-Other	100%	100%	145.0	116.0	50.0	223.4	153.8	50.0
Fleet-wide CO2 Performance			77.3		70	107.3		73

*CCWG Baseline is the CCWG 2009 average.

out of 100

out of 100

Clean Cargo Member Companies

American Eagle Outfitters, Inc.
APL
BDP International
CMA CGM
COSCON
CSAV
DAMCO
DB Schenker
DHL Deutsche Post
Electrolux
Hamburg Sud
Hanjin Shipping
Hapag Lloyd
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IKEA
JF Hillebrand
Kohl's
Kuehne + Nagel Inc
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Matson
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NIKE, Inc.
Nordstrom, Inc.
NYK Line
OOCL
Phillips-Van Heusen Corporation
Polo Ralph Lauren Corporation
Tchibo GmbH
United Arab Shipping Company
Walmart Stores, Inc.
Yang Ming Marine Transport Corp.

About Clean Cargo Working Group

Clean Cargo Working Group (CCWG) is a global, business-to-business initiative dedicated to improving the environmental performance of marine container transport. CCWG creates practical tools for measuring, evaluating, and reporting the environmental impacts of global goods transportation; helping ocean freight carriers track and benchmark their performance and easily report to customers in a standard format; and helping cargo owners (shippers) review and compare carriers' environmental performance when reporting and making informed buying decisions. Today, CCWG tools represent the industry standard for measuring and reporting ocean carriers' environmental performance on carbon-dioxide emissions.

About BSR

BSR works with its global network of nearly 300 member companies to build a just and sustainable world. From its offices in Asia, Europe, and North and South America, BSR develops sustainable business strategies and solutions through consulting, research, and cross-sector collaboration. Visit www.bsr.org for more information about BSR's more than 20 years of leadership in sustainability.

About the Authors

This report was written by Julia Beier and Jonathan Morris with contributions from Clean Cargo shipper members. The authors would like to thank the Clean Cargo Steering Committee for their final review.

For More Information

To learn more about Clean Cargo Working Group and how it can help you with your logistic supply chain or carbon measurement needs, please contact Angie Farrag, Associate Director, Transport & Logistics at: afarrag@bsr.org.